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Subject: Success in BIOL 6A based on pathway into BIOL 6A

Methodology

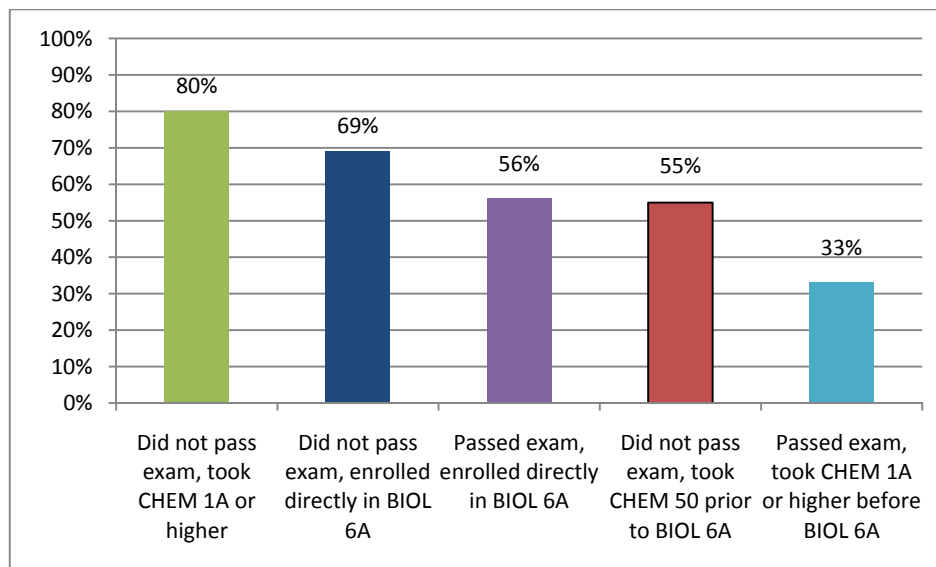
Student success rates were calculated for students who took BIOL 6A in fall 2009 based upon how students got into the course, either by passing the CHEM 1A/BIO 6A placement test with a score of 22 or higher out of 44, by taking and passing CHEM 1A or higher or CHEM 50, or by having no pre-requisite clearance. Students who passed CHEM 50 or CHEM 1A or higher anytime between fall 2006 and summer 2009 were tracked through fall 2009 to determine their success in BIOL 6A. Only the lowest Chemistry course a student took was included.

Success is students who received an A, B, C or P while non successful students received a D, F, I, NP. Students who withdrew received a W.

Highlights

- Students with the highest success rate in BIOL 6A (80%), are students who took the placement exam but did not pass, then enrolled in CHEM 1A or higher prior to taking BIOL 6A. 22% of students take this pathway.

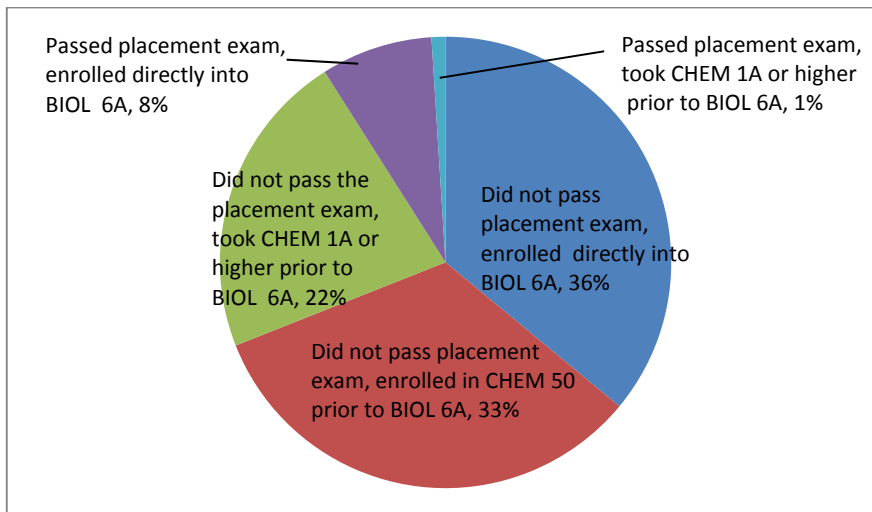
Success Rates in BIOL 6A



- Students with a success rate of 69% take the placement exam but do not pass it, then enroll directly into BIOL 6A without taking a Chemistry course, 36% of students take this pathway.

- Students with a success rate of 56% take the placement exam and pass, then enroll directly into BIOL 6A. 8% of students take this pathway.
- Students with a success rate of 55% take the placement exam but do not pass it, then enroll in CHEM 50 prior to BIOL 6A. 33% of students take this pathway.
- Overall success rates for BIOL 6A between 2006-07 and 2010-11 are 65%.

Pathway to BIOL 6A



Findings

- 205 grades were awarded to students who took BIOL 6A in fall 2009. Of those students, 3 passed the placement exam but enrolled in CHEM 1A or higher, 1 student was successful, 1 was not successful, and 1 withdrew from BIOL 6A.
- 45 students did not pass the placement exam and enrolled in CHEM 1A or higher, 36 students passed (80%) BIOL 6A, 2 did not pass (4%), 7 (16%) withdrew.
- 67 students did not pass the placement exam and took CHEM 50, 37 (55%) students passed, 21 (31%) did not pass, and 9 (13%) withdrew from BIOL 6A.
- 16 students passed the placement exam and did not take a Chemistry course, 9 (56%) passed, 6 (38%) did not pass, and 1 withdrew from BIOL 6A.
- 74 students did not enroll in a Chemistry course and did not pass the placement exam prior to taking BIOL6A, of those students, 51 (69%) passed, 12 (16%) did not pass, and 11 (15%) withdrew from BIOL 6A.
- Of only the students that were successful in BIOL 6A, 38% (51) did not pass the placement exam nor take a Chemistry course, 28% (37) did not pass the exam and took CHEM 50, and 27% (36) did not pass the placement exam and took CHEM 1A or higher.

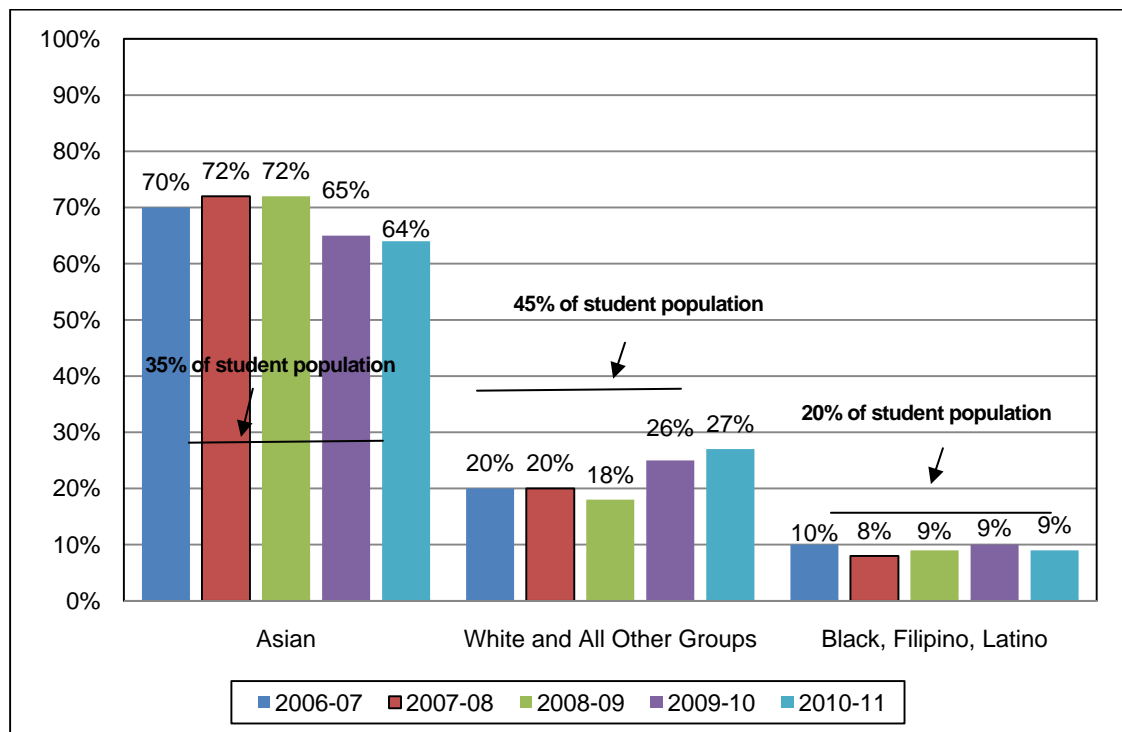
BIOL Success Rates:

- Success rates in BIOL 6A are lower than other courses in the BIO sequence, on average, BIOL 6A success rate was 65% between 2006-07 and 2010-11, which may be a result of it being the first course in the series.
- Success in BIOL 6B for the 5-year period was 82% on average.
- The average success rate for BIOL 6C was 97%.
- Success rates by ethnicity vary from year-to-year and course-to-course.

BIOL 6A Enrollment by Ethnicity:

- Asian students enroll in Biology courses at a higher rate than all other ethnic groups. Black, Filipino and Latino students enroll in Biology courses at the lowest rate of all ethnic groups; this pattern is consistent between 2006-07 and 2010-11 for BIOL6A and 6B.
- Across the time frame, 64%-72% of enrollment in BIOL 6A was made up of Asian students while 18%-27% was made up of White and all other groups while 8%-10% was made up of Black, Filipino and Latino students.

Enrolment in BIOL 6A by Ethnicity, 2006-07 to 2010-11



Success Rates by Credits Attempted:

- Success rates in BIOL 6A do not seem to be affected by the number of credits attempted by students in the course.

Placement Exam

I explored the scores students received on the placement exam to determine if any students that were enrolled in the course were on the cusp of passing the placement exam.

- Of the students enrolled in BIOL 6A that did not pass the placement, only one student had a score of 21, that student took CHEM 1A or higher and was successful in BIOL 6A. All other students that scored below the cut score received a score below 12.

Success in BIOL 6A

Based on Chemistry Course History and Placement Exam

Row Percent	Success		Non Success		Withdraw		Total	
	Grades	Row Percent	Grades	Row Percent	Grades	Row Percent	Grades	Row Percent
BIOL006A CHEM1A Passed CHEM1A/BIO6A Test or Higher	1	33%	1	33%	1	33%	3	100%
Did Not Pass	36	80%	2	4%	7	16%	45	100%
CHEM50 Did Not Pass	37	55%	21	31%	9	13%	67	100%
No Previous CHEM Course Passed CHEM1A/BIO6A Test	9	56%	6	38%	1	6%	16	100%
Did Not Pass	51	69%	12	16%	11	15%	74	100%
Total	134	65%	42	20%	29	14%	205	100%

Students who took BIOL6A in fall 2009 who took the lowest course in the Chemistry series first (CHEM50, CHEM1A or higher) anytime between 2006F and 2009M, as well as if the student took the CHEM1A/BIO6A placement exam and passed with a score of 22 or higher.

Column Percent	Success		Non Success		Withdraw		Total	
	Grades	Column Percent	Grades	Column Percent	Grades	Column Percent	Grades	Column Percent
BIOL006A CHEM1A Passed CHEM1A/BIO6A Test or Higher	1	1%	1	2%	1	3%	3	1%
Did Not Pass	36	27%	2	5%	7	24%	45	22%
CHEM50 Did Not Pass	37	28%	21	50%	9	31%	67	33%
No Previous CHEM Course Passed CHEM1A/BIO6A Test	9	7%	6	14%	1	3%	16	8%
Did Not Pass	51	38%	12	29%	11	38%	74	36%
Total	134	100%	42	100%	29	100%	205	100%

Students who took BIOL6A in fall 2009 who took the lowest course in the Chemistry series first (CHEM50, CHEM1A or higher) anytime between 2006F and 2009M, as well as if the student took the CHEM1A/BIO6A placement exam and passed with a score of 22 or higher.

Success Rates by Course - 2006-07 to 2010-11
 BIO6A, BIO6B, BIO6C

		Success		Non Success		Withdraw		Total	
		Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
2006-07	BIOL6A	190	65%	47	16%	56	19%	293	100%
	BIOL6B	144	88%	10	6%	10	6%	164	100%
	BIOL6C	100	98%			2	2%	102	100%
2007-08	BIOL6A	258	78%	46	14%	27	8%	331	100%
	BIOL6B	170	85%	16	8%	14	7%	200	100%
	BIOL6C	143	99%			2	1%	145	100%
2008-09	BIOL6A	189	63%	57	19%	52	17%	298	100%
	BIOL6B	136	78%	32	18%	7	4%	175	100%
	BIOL6C	128	97%			4	3%	132	100%
2009-10	BIOL6A	217	61%	81	23%	60	17%	358	100%
	BIOL6B	157	81%	25	13%	13	7%	195	100%
	BIOL6C	137	94%	2	1%	7	5%	146	100%
2010-11	BIOL6A	211	58%	83	23%	72	20%	366	100%
	BIOL6B	162	76%	33	16%	17	8%	212	100%

Enrollment by Ethnicity - 2006-07 to 2010-11
BIOL 6A, BIOL6B, BIOL6C

		BIOL006A		BIOL006B		BIOL006C		
		Grades	Percent	Grades	Percent	Grades	Percent	
2006-07	Asian	204	70%	116	71%	78	76%	
	Black	7	2%	4	2%	3	3%	
	Filipino	14	5%	8	5%	3	3%	
	Hispanic	9	3%	1	1%	2	2%	
	Multi-Ethnic	2	1%					
	White	42	14%	30	18%	13	13%	
	Nat. Amer.			1	1%	1	1%	
	Unreported	15	5%	4	2%	2	2%	
	Total	293	100%	164	100%	102	100%	
2007-08	Asian	237	72%	145	73%	105	72%	
	Black	9	3%	5	3%	4	3%	
	Filipino	8	2%	4	2%	5	3%	
	Hispanic	10	3%	6	3%	3	2%	
	Multi-Ethnic	3	1%	2	1%			
	White	40	12%	28	14%	24	17%	
	Unreported	20	6%	9	5%	3	2%	
		Total	331	100%	200	100%	145	100%
2008-09	Asian	216	72%	132	75%	103	78%	
	Black	6	2%	4	2%			
	Filipino	12	4%	7	4%	3	2%	
	Hispanic	10	3%	5	3%	4	3%	
	White	36	12%	15	9%	12	9%	
	Unreported	18	6%	12	7%	10	8%	
		Total	298	100%	175	100%	132	100%
	2009-10	Asian	232	65%	131	67%	104	71%
Black		8	2%	2	1%	3	2%	
Filipino		13	4%	9	5%	3	2%	
Hispanic		13	4%	7	4%	5	3%	
White		46	13%	27	14%	14	10%	
Multi-Ethnic		10	3%	3	2%	4	3%	
Nat. Amer.		1	0%					
Unreported		35	10%	16	8%	13	9%	
	Total	358	100%	195	100%	146	100%	
2010-11	Asian	237	64%	143	67%			
	Black	5	1%	2	1%			
	Filipino	13	4%	6	3%			
	Hispanic	15	4%	5	2%			
	Multi-Ethnic	20	5%	13	6%			
	White	37	10%	23	11%			
	Unreported	41	11%	20	9%			
		Total	368	100%	212	100%		

Success Rates by Ethnicity - 2006-07 to 2010-11
 BIO6A, BIO6B, BIO6C

			Success		Non Success		Withdraw		Total	
			Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
2006-07	BIOL6A	Asian	128	63%	35	17%	41	20%	204	100%
		Black	4	57%	1	14%	2	29%	7	100%
		Filipino	7	50%	4	29%	3	21%	14	100%
		Hispanic	7	78%			2	22%	9	100%
		Multi-Ethnic	2	100%					2	100%
		White	33	79%	6	14%	3	7%	42	100%
		Unreported	9	60%	1	7%	5	33%	15	100%
	BIOL6B	Asian	102	88%	4	3%	10	9%	116	100%
		Black	4	100%					4	100%
		Filipino	7	88%	1	13%			8	100%
		Hispanic	1	100%					1	100%
		White	26	87%	4	13%			30	100%
		Nat. Amer.			1	100%			1	100%
		Unreported	4	100%					4	100%
	BIOL6C	Asian	76	97%			2	3%	78	100%
		Black	3	100%					3	100%
		Filipino	3	100%					3	100%
		Hispanic	2	100%					2	100%
		White	13	100%					13	100%
		Nat. Amer.	1	100%					1	100%
		Unreported	2	100%					2	100%
2007-08	BIOL6A		3	75%			1	25%	4	100%
		Asian	182	77%	36	15%	19	8%	237	100%
		Black	6	67%	2	22%	1	11%	9	100%
		Filipino	8	100%					8	100%
		Hispanic	8	80%	2	20%			10	100%
		Multi-Ethnic	3	100%					3	100%
		White	35	88%	2	5%	3	8%	40	100%
		Unreported	13	65%	4	20%	3	15%	20	100%
	BIOL6B		1	100%					1	100%
		Asian	129	89%	10	7%	6	4%	145	100%
		Black	3	60%	1	20%	1	20%	5	100%
		Filipino	3	75%			1	25%	4	100%
		Hispanic	4	67%	1	17%	1	17%	6	100%
		Multi-Ethnic	1	50%	1	50%			2	100%
White		24	86%			4	14%	28	100%	
Unreported	5	56%	3	33%	1	11%	9	100%		
BIOL6C		1	100%					1	100%	
	Asian	104	99%			1	1%	105	100%	
	Black	4	100%					4	100%	
	Filipino	5	100%					5	100%	
	Hispanic	3	100%					3	100%	

Success Rates by Ethnicity - 2006-07 to 2010-11

BIO6A, BIO6B, BIO6C

2008-09	BIOL6A	White	23	96%		1	4%	24	100%			
		Unreported	3	100%				3	100%			
		Asian	137	63%	47	22%	32	15%	216	100%		
		Black	3	50%			3	50%	6	100%		
		Filipino	8	67%	1	8%	3	25%	12	100%		
	BIOL6B	Hispanic	8	80%			2	20%	10	100%		
		White	21	58%	8	22%	7	19%	36	100%		
		Unreported	12	67%	1	6%	5	28%	18	100%		
		Asian	104	79%	22	17%	6	5%	132	100%		
		Black	3	75%	1	25%			4	100%		
2009-10	BIOL6C	Filipino	3	43%	4	57%		7	100%			
		Hispanic	4	80%	1	20%		5	100%			
		White	13	87%	2	13%		15	100%			
		Unreported	9	75%	2	17%	1	8%	12	100%		
		Asian	99	96%			4	4%	103	100%		
	2009-10	BIOL6A	Filipino	3	100%				3	100%		
			Hispanic	4	100%				4	100%		
			White	12	100%				12	100%		
			Unreported	10	100%				10	100%		
			Asian	143	62%	48	21%	41	18%	232	100%	
2009-10		BIOL6B	Black	5	63%	3	38%		8	100%		
			Filipino	5	38%	4	31%	4	31%	13	100%	
			Hispanic	9	69%	4	31%		13	100%		
			White	30	65%	9	20%	7	15%	46	100%	
			Multiple Eth	6	60%	3	30%	1	10%	10	100%	
		2009-10	BIOL6C	Native Amer	1	100%				1	100%	
				Unreported	18	51%	10	29%	7	20%	35	100%
				Asian	108	82%	16	12%	7	5%	131	100%
				Black	2	100%					2	100%
				Filipino	5	56%	3	33%	1	11%	9	100%
2010-11	BIOL6A		Hispanic	5	71%	1	14%	1	14%	7	100%	
			White	23	85%	2	7%	2	7%	27	100%	
			Multiple Eth	2	67%			1	33%	3	100%	
			Unreported	12	75%	3	19%	1	6%	16	100%	
			Asian	99	95%			5	5%	104	100%	
	2010-11	BIOL6B	Black	3	100%				3	100%		
			Filipino	3	100%				3	100%		
			Hispanic	5	100%				5	100%		
			White	13	93%			1	7%	14	100%	
			Multiple Eth	3	75%	1	25%			4	100%	
2010-11	BIOL6C	Unreported	11	85%	1	8%	1	8%	13	100%		
		Asian	138	59%	56	24%	41	17%	235	100%		
		Black	1	20%	2	40%	2	40%	5	100%		
		Filipino	6	46%	3	23%	4	31%	13	100%		

Success Rates by Ethnicity - 2006-07 to 2010-11

BIO6A, BIO6B, BIO6C

	Hispanic	5	33%	4	27%	6	40%	15	100%
	Multi-Ethnic	10	50%	5	25%	5	25%	20	100%
	White	24	65%	6	16%	7	19%	37	100%
	Unreported	27	66%	7	17%	7	17%	41	100%
BIO6B	Asian	110	77%	25	17%	8	6%	143	100%
	Black	2	100%					2	100%
	Filipino	4	67%	2	33%			6	100%
	Hispanic	5	100%					5	100%
	Multi-Ethnic	7	54%	1	8%	5	38%	13	100%
	White	16	70%	4	17%	3	13%	23	100%
	Unreported	18	90%	1	5%	1	5%	20	100%

Success Rates in BIOL6A by Course Credits Attempted

Term	Credits Attempted	Success		Non Success		Withdraw		Total	
		Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
2006-07	6-10	14	54%	8	31%	4	15%	26	100%
	11-15	62	57%	22	20%	25	23%	109	100%
	16-20	97	71%	17	13%	22	16%	136	100%
	21-27	16	76%			5	24%	21	100%
2007-08	6-10	20	65%	7	23%	4	13%	31	100%
	11-15	87	79%	16	15%	7	6%	110	100%
	16-20	120	79%	20	13%	11	7%	151	100%
	21-27	30	79%	3	8%	5	13%	38	100%
	Over 28 credits	1	100%					1	100%
2008-09	6-10	15	60%	3	12%	7	28%	25	100%
	11-15	45	56%	25	31%	11	14%	81	100%
	16-20	105	66%	23	14%	32	20%	160	100%
	21-27	24	75%	6	19%	2	6%	32	100%
2009-10	6-10	23	58%	10	25%	7	18%	40	100%
	11-15	83	60%	35	25%	20	14%	138	100%
	16-20	89	64%	30	21%	21	15%	140	100%
	21-27	22	56%	6	15%	11	28%	39	100%
2010-11	6-10	17	57%	11	37%	2	7%	30	100%
	11-15	79	54%	40	28%	26	18%	145	100%
	16-20	97	59%	30	18%	38	23%	165	100%
	21-27	19	68%	3	11%	6	21%	28	100%