

## LEARNING COMMUNITIES AND STUDENT SUCCESS: FALL 2008

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### Background and Methodology

The Title V grant at San Joaquin Delta College includes a number of different programs and services designed to build institutional capacity to serve historically underrepresented students. The grant provides funding for a number of learning assistance and academic support programs, one of which is student learning communities. Student learning communities are clusters of courses in which students attend linked classes with a particular theme or shared characteristic. These courses are offered to students as an alternative to traditional courses. At Delta College, learning communities allow students to take three courses with a similar theme and with the same classmates. In fall 2008, a total of eight learning communities were offered to students, some based on the college's assessment levels and others based on a particular career track or special student program. The following courses were offered as learning communities based on student assessment levels:

- Assessment Level 1 (Lowest Skill Levels)
  - Group 1
    - English 70
    - Reading 91A
    - Guidance 5
  - Group 2
    - English 70
    - Guidance 5
    - Reading 98
  - Group 3
    - English 87
    - Reading 91E
    - Guidance 19
- Assessment Level 2
  - Group 1
    - Math 80
    - Guidance 5
    - English 79
  - Group 2 (AFFIRM learning community)
    - English 79
    - History 30A
    - Guidance 5
- Assessment Level 3 (Highest Skill Levels)
  - Group 1
    - English 1A
    - Communication Studies 1A
    - Library Skills 1

In addition, the following courses were offered as learning communities for special programs or career tracks:

- Caterpillar Apprenticeship
  - English 79
  - Caterpillar Apprenticeship 90
  - Communication Studies 1A

- Puente Program
  - Guidance 5
  - English 79

Two of learning communities were offered for students in special programs, one for AFFIRM program students and one for Puente program students. The goal for all of the learning communities at the college, as with other Title V programs and services, is to support student success in key courses and to promote success among students from historically underrepresented groups. In order to determine if the learning communities were effective at improving student success, success and retention rates were compared between students in learning community courses and students who enrolled in the same courses without a learning community. Data were obtained from the college's internal database, System 2000, for student demographics, course enrollment and grades in the fall 2008 semester. Retention and success rates for all learning community course sections were aggregated and compared to retention and success rates aggregated across all other course sections. Chi-square analysis was conducted to determine if there was a statistically significant difference between success and retention rates in each course type (learning community versus traditional courses). The results of the analysis are summarized in the following pages.

## **Results**

### **► Success**

Success and retention rates for learning community courses varied widely from course to course and, in some cases, section to section. Learning community success rates were significantly higher than non-learning community success rates in three courses but otherwise did not differ from those of traditional, non-learning community, courses. Success rates for Reading 91E were substantially higher in learning community sections (86%) than in other sections (59%). Similarly, success rates were considerably higher for learning community sections in Guidance 19 (93% versus 70%) and History 30A (70% versus 54%) than for non-learning community sections.

In order to further examine the success rates in English 79 in special program learning community and other learning community courses, the AFFIRM and Puente sections of English 79 were compared separately to a stratified random sample of 150 students in non-learning community sections of English 79. Students were selected for the comparison group in proportion to the ethnicities of AFFIRM and Puente students. The remaining two learning community sections of English 79 were combined and compared to all non-learning community sections of the course.

Success rates in the AFFIRM learning community section of English 79 were higher (67%), but not significantly higher, than success rates for students in the comparison group (57%). Among students in the Puente learning community section of English 79, success rates were substantially higher (92%) than for the comparison sample of non-learning community students (60%). The two other learning community sections of English 79 were compared to all other, non-learning community sections. Success rates were slightly lower (59% versus 64%) for these learning community sections than for the non-learning community sections of the course.

In other courses, success rates were higher, although not significantly higher, for learning community sections than for other sections. These courses include:

- English 1A
- Reading 91A
- Math 80
- Library Skills 1

Success and retention rates for each course are provided in Table 1. Note that Communication Studies 1A was not included in the current study due to unusual circumstances in the learning community sections (an instructor change mid-semester).

#### ► Retention

Retention rates were higher for learning community sections in most courses, although the differences between combined learning community sections and non-learning community sections were not statistically significant for any course. Specifically, retention rates for learning community sections were somewhat higher than for non-learning community sections in the following courses:

- Reading 91A
- Math 80
- History 30A
- Guidance 19
- Library Skills 1

In Reading 91A, the retention rate for the learning community section was 80% versus a retention rate of 69% for non-learning community sections. The learning community section of Math 80 had a retention rate of 86% compared to 74% for all other sections. The retention rate for the learning community section of History 30A (80%) was higher than for other sections (71%). In Guidance 19, all learning community students were retained, compared to 90% of other students. In Library Skills 1, 84% of learning community students were retained, and just 64% of non-learning community students were retained.

The two special program English 79 learning community sections were separated and compared to non-learning community sections. Retention rates for Puente learning community students were significantly higher (97%) than for comparison group students (80%). Retention rates were also higher, though not significantly higher (83%), for AFFIRM learning community students than for comparison group students (73%). Retention rates were slightly higher (87%) for the other learning community sections compared to non-learning community sections (80%), but differences were not statistically significant.

In sum, learning community sections had higher retention rates than non-learning community sections in many courses, but in general the differences were not large enough to be statistically significant.

#### Conclusions

The results of this study are preliminary but show promise for learning communities and student success in specific courses. Success rates were significantly higher for learning community students in Reading 91E, History 30A and Guidance 19. Success rates were also higher in English 1A, Reading 91A, Math 80 and Library Skills 1; however, these differences were not statistically

significant. There were no significant differences between aggregate learning community and non-learning community retention rates; however, in the Puente learning community, students had significantly higher success and retention rates than a comparable group of students in non-learning classes. Results show some promise for a number of other learning community course sections: retention rates were somewhat higher, though not statistically significant, for learning community sections of Reading 91A, Math 80, History 30A, Guidance 19 and Library 1.

Overall, learning community outcomes for the fall 2008 semester appear promising but somewhat inconclusive. Positive results were observed in the form of higher success rates in a few courses, but the overall result of the learning communities across all courses and sections was less clear. Small sample sizes and instructional variation may account for some of the inconsistencies in the findings. In addition, a number of other factors related to student success were not controlled for or examined in the present study. Additional studies should be conducted across different courses, instructors and semesters to examine the larger impact of learning communities, after controlling for these factors, on success and retention rates.

#### DATA TABLES

*Table 1. Retention Rates for Learning Community and Non-Learning Community Courses*

Course	Enrolled		Successful		Retained	
	N	%	N	%	N	%
<b>English 70</b>						
Non-Learning Community Sections	573	90.5%	397	69.3%	482	84.1%
Learning Community Sections	60	9.5%	37	61.7%	52	86.7%
<i>Overall</i>	<i>633</i>	<i>100.0%</i>	<i>434</i>	<i>68.6%</i>	<i>534</i>	<i>84.4%</i>
<b>English 87</b>						
Non-Learning Community Sections	100	87.7%	64	64.0%	82	82.0%
Learning Community Sections	14	12.3%	9	64.3%	10	71.4%
<i>Overall</i>	<i>114</i>	<i>100.0%</i>	<i>73</i>	<i>64.0%</i>	<i>92</i>	<i>80.7%</i>
<b>English 79*</b>						
Non-Learning Community Sections	1,221	90.8%	778	63.7%	<b>982</b>	<b>80.4%</b>
Learning Community Sections	123	9.2%	88	71.5%	<b>110</b>	<b>89.4%</b>
<i>Overall</i>	<i>1,344</i>	<i>100.0%</i>	<i>866</i>	<i>64.4%</i>	<i><b>1,092</b></i>	<i><b>81.2%</b></i>
<b>English 1A</b>						
Non-Learning Community Sections	1,515	98.4%	1,036	68.4%	1,230	81.2%
Learning Community Sections	25	1.6%	18	72.0%	21	84.0%
<i>Overall</i>	<i>1,540</i>	<i>100.0%</i>	<i>1,054</i>	<i>68.4%</i>	<i>1,251</i>	<i>81.2%</i>
<b>Reading 91A</b>						
Non-Learning Community Sections	96	79.3%	60	62.5%	66	68.8%
Learning Community Sections	25	20.7%	19	76.0%	20	80.0%
<i>Overall</i>	<i>121</i>	<i>100.0%</i>	<i>79</i>	<i>65.3%</i>	<i>86</i>	<i>71.1%</i>
<b>Reading 91E</b>						
Non-Learning Community Sections	96	87.3%	<b>57</b>	<b>59.4%</b>	87	90.6%
Learning Community Sections	14	12.7%	<b>12</b>	<b>85.7%</b>	13	92.9%
<i>Overall</i>	<i>110</i>	<i>100.0%</i>	<i><b>69</b></i>	<i><b>62.7%</b></i>	<i>100</i>	<i>90.9%</i>
<b>Math 80</b>						
Non-Learning Community Sections	1,189	97.6%	544	45.8%	875	73.6%
Learning Community Sections	29	2.4%	17	58.6%	25	86.2%
<i>Overall</i>	<i>1,218</i>	<i>100.0%</i>	<i>561</i>	<i>46.1%</i>	<i>900</i>	<i>73.9%</i>

<b>History 30A</b>	N	%	N	%	N	%
Non-Learning Community Sections	311	91.2%	<b>169</b>	<b>54.3%</b>	222	71.4%
Learning Community Sections	30	8.8%	<b>21</b>	<b>70.0%</b>	24	80.0%
<i>Overall</i>	<i>341</i>	<i>100.0%</i>	<i><b>190</b></i>	<i><b>55.7%</b></i>	<i>246</i>	<i>72.1%</i>
<b>Guidance 5</b>	N	%	N	%	N	%
Overall/Learning Community Sections	156	100.0%	113	72.4%	134	85.9%
<b>Guidance 19</b>	N	%	N	%	N	%
Non-Learning Community Sections	82	84.5%	<b>56</b>	<b>68.3%</b>	71	86.6%
Learning Community Sections	15	15.5%	<b>14</b>	<b>93.3%</b>	15	100.0%
<i>Overall</i>	<i>97</i>	<i>100.0%</i>	<i><b>70</b></i>	<i><b>72.2%</b></i>	<i>86</i>	<i>88.7%</i>
<b>Library 1</b>	N	%	N	%	N	%
Non-Learning Community Sections	14	35.9%	6	42.9%	9	64.3%
Learning Community Sections	25	64.1%	17	68.0%	21	84.0%
<i>Overall</i>	<i>39</i>	<i>100.0%</i>	<i>23</i>	<i>59.0%</i>	<i>30</i>	<i>76.9%</i>
<b>Caterpillar Apprenticeship 90</b>	N	%	N	%	N	%
Non-Learning Community Students	3	11.5%	3	100.0%	3	100.0%
Learning Community Students	23	88.5%	23	100.0%	23	100.0%
<i>Overall</i>	<i>26</i>	<i>100.0%</i>	<i>26</i>	<i>100.0%</i>	<i>26</i>	<i>100.0%</i>

\*Students in special program learning community sections were separated and compared to similar students in non-learning community sections; results are illustrated in Tables 2, 3 and 4.

**Bold text** in Successful and Retained columns represents statistically significant differences at the 95% confidence level

Table 2. English 79 Success Rates for AFFIRM Learning Community Students and Comparison Group Students

	Enrolled		Successful		Retained	
	N	%	N	%	N	%
Sample of Other Sections+	150	83.3%	85	56.7%	110	73.3%
AFFIRM Learning Community	30	16.7%	20	66.7%	25	83.3%
<i>Overall</i>	<i>180</i>	<i>100.0%</i>	<i>105</i>	<i>58.3%</i>	<i>135</i>	<i>75.0%</i>

+ A stratified random sample was generated to create a comparison group similar in student ethnicity to this learning community section of English 79

*Note.* Differences were not statistically significant

Table 3. English 79 Success Rates for Puente Learning Community Students and Comparison Group Students

	Enrolled		Successful**		Retained**	
	N	%	N	%	N	%
Sample of Other Sections+	150	79.4%	90	60.0%	120	80.0%
Puente Learning Community	39	92.3%	36	92.3%	38	97.4%
<i>Overall</i>	<i>189</i>	<i>100.0%</i>	<i>126</i>	<i>66.7%</i>	<i>158</i>	<i>83.6%</i>

+ A stratified random sample was generated to create a comparison group similar in student ethnicity to this learning community section of English 79

\*\*Significant at the 99% confidence level

Table 4. English 79 Success Rates for Non-Affirm Learning Community Sections and All Non-Learning Community Sections

	Enrolled		Successful		Retained	
	N	%	N	%	N	%
Non-Learning Community	1,221	95.8%	778	63.7%	982	80.4%
Learning Community	54	4.2%	32	59.3%	47	87.0%
<i>Overall</i>	<i>1,275</i>	<i>100.0%</i>	<i>810</i>	<i>63.5%</i>	<i>1,029</i>	<i>80.7%</i>

*Note.* Differences were not statistically significant