

## Small Learning Communities at San Joaquin Delta College Pilot Study Results

Alyssa Nguyen  
Jessica Mindnich  
Matt Wetstein

For a number of years, San Joaquin Delta College (SJDC) has operated learning communities that link course enrollments and allow students to take more than one course as a peer cohort. Learning communities have been implemented across many different campuses for the last 20 years now and have been found to boost student success, retention, and persistence rates (for a review see Minker, 2002). As one of the strategies proposed to increase academic success and retention rates for Hispanic students at SJDC, two small learning communities, *First Year Experience* were developed and offered in fall 2007. During this term, a total of 119 students enrolled in 1 of the 4 small learning communities offered on campus (Table 1). Of the 119, 56.3 % were females, 49.6% identified themselves as Hispanic, and 69.8% were first year students.

**Table 1**  
**Small Learning Communities' Curriculum**

	<b>*First Year Experience #1</b>	<b>*First Year Experience #2</b>	<b>Puente</b>	<b>Fall Skills Academy</b>
<b>Courses</b>	Guid 005 Read 091E Eng 070	Guid 005 Eng 079 Math 080	Guid 005 Eng 079	Eng 070 Math 072 Read 91A Guid 019

*Note.* \* These were the two Title V learning communities used in data analyses for pre and post survey results

In the beginning of the semester, surveys were administered to students in all 4 learning communities. These surveys contained demographic information requests and items measuring their perceptions of the campus climate and their academic self-efficacy. Towards the end of the semester, the same survey was administered to examine whether students' experiences in the small learning communities had an impact on their initial perceptions of the campus climate and their academic self-efficacy. Thus, the purpose of this paper is to report the findings found in this preliminary pre and post-survey study.

### Measures

Fourteen items were used to measure perceptions of the campus climate (teachers, other students, and Delta College). These items were measured on a 7-point frequency scale ranging from 1 = *never* to 7 = *always* to questions such as: *How often can you say...my teachers care about me, my classmates are approachable.* Items are keyed so that higher scores represent more positive perceptions. The self-efficacy measure contained 22-items keyed from 1 = *not well at all* to 7 = *very well* to questions such as: *How well can you...complete writing assignments for school, get help with your schoolwork when you need it.* Items for this measure are keyed so that higher scores represent higher academic self-efficacy. These two measures are summed to get a

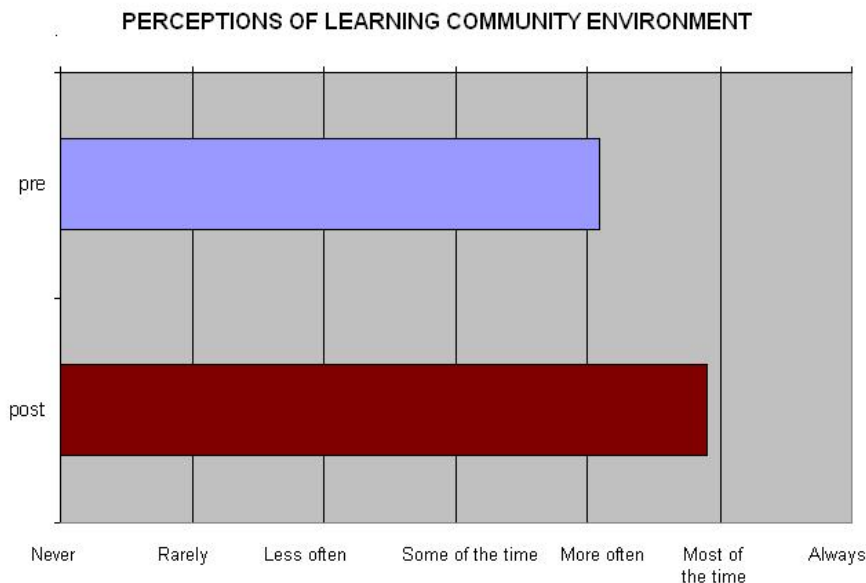
composite score representing their perceptions of the campus climate and perceived sense of self-efficacy.

### Preliminary Results

Thirty-six surveys for post data were returned from the First Year Experience #1 (FYE) and First Year Learning Experience #2 learning community students. However, only surveys that met 3 criteria were used in the analyses: 1) measures with less than 25% of missing data on both pre and post surveys, 2) surveys with learning community identified, and 3) surveys with valid student identification numbers. Measures with less than 25% missing data on items were filled in with the mean value of the measure. After screening the data, 34 surveys were retained for evaluation (FYE#1= 19 and FYE#2 = 15).

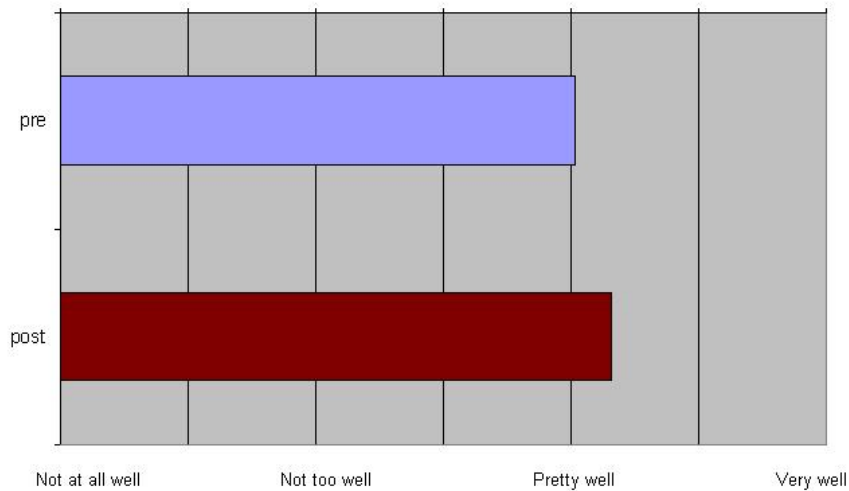
This final sample contained 76.5% first year, 58.8% female, and 35.3% Hispanic students. Paired t-test analyses were run to examine whether perceptions of the campus climate and academic self-efficacy changed after the experience. Results reveal that students' perceptions of the campus climate increased significantly (see Figure 1). Towards the end of the semester, students were reporting more positive perceptions of their campus climate than they did at the start (Means: 82.8 vs. 71.3 respectively). Results for the academic self-efficacy revealed null results suggesting that the learning community experience did not affect their perceived sense of self-efficacy. However, although the results were non-significant, these students were reporting high levels of academic self-efficacy in the beginning (Mean = 110.8) and their reported levels did increase marginally at the end (Mean = 116.8) (see Figure 2).

**Figure 1**



**Figure 2**

**Self-Efficacy**



Student Outcomes: Success and Persistence Rates

Of the 34 students sampled in this study, 88.2% enrolled for spring 2008 classes showing a high persistence rate for the students in the learning communities that returned post survey results. Chi-square Goodness of Fit tests were used to test to see if the success rates differed from the success rates of similar section courses. Sections that were similar in time of day, number of instruction days per week, and number of instruction hours per day were used as a comparison group to determine whether the learning community experience had a positive impact on student success rates.

Final course grades were used to determine success rates whereby grades of an *A*, *B*, *C*, or *Credit (R)* were considered a success and finals grades: *D*, *W*, *No Credit (N)* were considered a fail. Results revealed significant differences in success rates between the learning community sections and the comparison group sections for English 79, Math 80, and Reading 91E. The success rates for the learning communities in these courses were higher than the overall success rates for the college (see Table 2). Students who were taking these courses as part of the learning community and completed the post survey had a higher success rate than students who were not. This provides some initial evidence that this method of instruction can be effective at increasing student success rates.

However, because not everyone who enrolled in these learning communities (FYE 1 and 2) completed a post survey, analyses were also ran to see whether there were differences in success rates between those who completed the survey and those who did not. Chi-square Test of Independence results suggest that students who completed the post surveys had a higher success rate than students who did not complete the post surveys in the two learning communities for the Math 80, Reading 091E, and Guidance 005 classes.

Due to differences found between the student success rates of those that completed the post survey and those that did not, the overall student success rate of the learning community classes were compared to that of the comparison groups. Results revealed only significant differences in student success rates for English 70 and English 79. Students from the learning community English 79 class were passing their classes at a higher rate than the English 79 comparison group; whereas students from the English 70 comparison group were passing their classes at a higher rate than students from the English 70 learning community class. No other significant differences in student success rates were seen for the other courses. In terms of persistence, students from the non-learning community comparison group showed an overall persistence rate of 82.6%, whereas students from the learning communities (post and no post survey result students) showed an overall persistence rate of 78.9%.

**Table 2<sup>1</sup>**  
**Student Success Rates for Learning Communities and Similar Delta Courses**

Success Rates for Fall 2007			
	FYE 1 and 2 Post Survey Students N = 34	FYE 1 and 2 All Students N = 62	Delta College Non-Learning Community
<b>Guidance 5</b>	91.2	72.6	100
<b>English 70</b>	68.4	56.3*	77.3
<b>English 79</b>	93.3*	89.3*	53.9
<b>Math 80</b>	86.7*	68.9	54.2
<b>Reading 91E</b>	84.2*	65.6	50

Note. <sup>1</sup> Guidance 5 did not have a comparison group because the only other section offered was another learning community section, \*  $p < .05$

### Conclusions

Based on these results, it appears that the learning communities are increasing student success or persistence rates. However, even though the learning community sections overall student success rates did not reach statistical significance, the raw percentages do show slightly better success rates in Math 80 and Reading 91E. Furthermore, the attenuation of the student success rates seen when data from the students who did not complete the post survey was added could have been associated with confounding factors that some of the learning community instructors expressed concern about. During informal interviews with the instructors, these instructors observed that an unusually large number of students in the learning community classes did not appear to be “college-ready” and some may have entered SJDC with undiagnosed learning disabilities. Given these observations made by the faculty, it could have been the case that the lack of significant student success rates and lower persistence rates found could have been attributable to the disproportionate number of *unprepared* college students. These observations were qualified to some degree when persistence rates were examined based on the English course the learning community students were in. Of the two learning communities investigated: students from English 70 had a lower persistence rate (75%) than students from English 79 (82.1%). The differences in persistence rates between the learning communities suggest that these preliminary results of the learning communities are not accurately portraying the potentially positive impact they may have on student success and retention rates.

Despite the overall results, this data does show some promising results. For example, examination of student success and retention rates did show that Hispanic students were getting the most out of the learning community experience. Of all the ethnicities, these students had the highest student success and retention rates. Also, the learning community students who did complete pre and post surveys reported significantly higher positive campus climate perceptions at the end of the semester. Moreover, these students also showed higher student success and persistence rates than the comparison group.

One reason why student success may have been so high for this group could have been because of their high reported levels of self-efficacy. Likewise, since the students were self-selecting into these learning communities it could also be that they were also more motivated to “try new things” than other students and thus the higher levels of motivation was what contributed to their higher success rates than the overall rates of the College. Numerous other conjectures can be made to explain these results; but given the significant increase in positive perceptions of the campus climate, it is just as likely that the learning community experience increased positive perceptions of the campus climate and this in turn helped increase the students’ success and persistence rates.