

U.C.R. Freshman Academic Experience Survey, 2006-07:
*First-year learning communities**

Executive summary

Survey participation

- Respondents more likely to have more advanced placement units and higher High School grade point averages, more transfer units and enrolled units, and be female.
- The overall response rate to the survey was 40.5%.

Who joins learning communities?

- Participation in learning communities was between 39% and 46%.
- One-third of learning community participants were in two or more programs.
- Who participated in first-year learning communities (FYLC) courses and programs is not highly predictable.
- Specific majors and colleges are more likely to participate; taking more units, living on campus, and higher HS GPA also contribute to decisions to participate.

Outcomes

- Program participants have more contact with faculty in office hours, and slightly more likely to have contact with TAs.
- FYLC participants engaged in more peer projects and had more socially diverse contacts in these groups. However, FYLC participants were less likely to be in study groups.
- Participants in FYLC courses and programs report higher levels of effort and engagement with their coursework.
- FYLC participants were more aware of academic support resources, and more likely to use them.
- Participants in FYLCs are more likely to be engaged with campus activities outside class.
- Participants in FYLCs would be only slightly more likely to recommend U.C.R. to a friend.

* This report was prepared for the Vice Provost of Undergraduate Instruction at the University of California, Riverside, by Robert Hanneman for the U.C.R. Survey Research Center. Do not quote or cite without the permission of the Office of the Vice Provost. Opinions expressed in this report do not necessarily reflect the views of the project sponsor.

Freshman Academic Experience Survey, 2006-07: *First-year learning communities*

Introduction

American higher education is in a period of extensive self-evaluation, motivated by concern about the quality of the undergraduate experience, both from within and without the academy. The idea that undergraduates are not effectively “engaged” with the higher educational experience is a recurring theme in this discourse.

Near the end of the Spring academic quarter of the 2006-2007 year, a web-based survey of first-year students at the University of California, Riverside was conducted. The extent of student’s “engagement” was measured along several dimensions.

The quality of the first-year experience at U.C. Riverside has been a focus of attention for a number of campus units for some time. Programs have been created both campus-wide and within the colleges to enrich the experience through “learning communities.” About 46% of the respondents to the Freshman Academic Experience Survey reported that they had participated in one or more of these programs.

In this report we address two basic questions: What factors affect the likelihood that a first-year student will participate in a learning community? And, are there notable differences between the levels of “engagement” between learning community participants and those who did not participate?

About the survey

The Freshman Academic Experience Survey was designed by stakeholders from the three large undergraduate colleges (BCOE, CNAS, and CHASS) and the Vice Provost for Undergraduate Instruction, with the assistance of the staff of the U.C.R. Survey Research Center (<http://survey.ucr.edu>). The survey was administered by being posted in the campus on-line course evaluation system near the end of the Spring academic quarter in 2007. The students who were selected for the sample saw a message soliciting their participation in the survey when they logged into their campus computer accounts.

The survey solicited information about whether the respondent had participated in any first-year learning community (hereafter FYLC). It also asked respondents to identify which of the 10 specific programs they had participated in.

The remainder of the survey asked items designed by local stakeholders to tap each of the five major dimensions of “engagement” that have been defined by the *National Survey of Student Engagement*: a) Student-faculty contact, b) Active/collaborative learning, c)

Academic challenge, d) Supportive campus environment, and e) Enriching educational experiences.

Data on demographic and academic backgrounds of all the students in the sample (both respondents and non-respondents) were collected from the U.C.R. Registrar's office. When merged with the survey responses, these data allow us to assess whether there are important differences between students who responded to the survey and those who did not. These data also allow us to examine what factors predict participation in learning communities, and to statistically adjust for these factors when assessing whether the levels of engagement differed between FYLC program participants and non-participants.

Who responded?

One-half of the first-year students at U.C.R. were randomly selected (by having student identification numbers that ended in an "even" digit). Of the 1,607 students who fell into the sample, 40.5% (651) completed the survey. Among those who completed the survey, almost all responded to every question asked.

A 40% response rate for a survey of this type is quite good, but it is low enough to raise concerns of whether respondents differed from non-respondents. That is, how likely is it that the results we discuss below are typical of the full population of first-year students?

There were no statistically significant differences between respondents and non-respondents on most demographic variables: age, ethnicity, membership in an under-represented group, non-resident citizenship status, coming from a low-income household, residing on campus or not, and being the first in one's family to attend college. There were no significant differences between respondents and non-respondents in the level of education attained by the respondent's parents.

Female students, however, were significantly more likely (47%) than male students (33%) to respond to the survey.

There were no significant differences between survey respondents and non-respondents on SAT or ACT test scores. However, respondents had, on the average, higher High School GPA (3.52 versus 3.41), and more advanced placement units (6.5 versus 5.4) than non-respondents. Respondents to the survey had earned significantly more transfer units (9.15 versus 7.13) than non-respondents. Respondents were enrolled in more units in the quarter of the survey (14.7 versus 14.6). There were no significant differences in the likelihood of responding to the survey across academic majors.

To assess the likelihood that survey results might be biased by these differences between respondents and non-respondents, those variables that differed significantly between respondents and non-respondents were used jointly to predict the likelihood of response. Taken together, the factors that differed significantly between respondents and non-respondents (gender, HS GPA, AP units, current enrollment levels, transfer units) account for 6% of the variance in the likelihood that a student responded to the survey.

We conclude that the results discussed below are likely to be quite representative of the entire population of first-year students. To further assure this, we control for all of the significant differences between respondents and non-respondents (and also between FYLC participants and non-participants) in assessing differences between the engagement levels of FYLC participants and non-participants.

Participation in learning communities

Respondents were asked if they had participated in any first-year learning community (FYLC). And, they were asked whether they had participated in each of the ten programs. Some respondents reported that they had been in specific programs, but said they were not in a FYLC. This “false negative” rate may simply be response error, or may indicate that certain programs are not understood by respondents to be a “FYLC.”

	Percent reporting participation	“False negative” rate
Any community	39.0	
CHASS Connect	10.3	2.8
CHASS Gateway	3.3	0.8
CHASS Themed Course	3.1	1.5
COE	8.1	1.0
CNAS	10.0	0.8
Freshman discovery seminar	9.8	3.8
Honors	8.0	2.0
Medical scholars	2.0	0.8
First year success program	5.4	1.5
Housing community	5.1	2.3

Note: the “false negative” rate is the percentage of all persons who reported participation in a particular program who did not report participation when asked about participation in learning communities. It may reflect lack of awareness that the program in which they participated was a “learning community,” or it may be simple response error.

For the remaining analyses, respondents who reported participation in any particular FYLC program (even if they responded negatively to the overall question), are treated as program participants. This “imputation” raises the percentage participating, overall to 45.6%.

Some respondents reported that they had participated in more than one FYLC. About two-thirds of FYLC participants (68.4%) participated in a single program; 24.2% participated in two programs, and 6.7% participated in three or four.

Since participation in first year learning communities is not mandatory, it is worthwhile exploring the types of students who selected these programs. There are several reasons why this is an important issue. First, program designers and administrators may be

interested in how effective recruitment efforts were with different constituencies. Second, staff and faculty delivering the programs may have an interest in how the students they are working with may differ from other U.C.R. undergraduates. Third, in order to properly evaluate whether FYLC programs have effects on student engagement, it is important – insofar as possible – to rule out, and control for “selection effects.” That is, differences in engagement between FYLC participants and non-participants may be due to pre-existing differences that lead more “engaged” students to select FYLC programs.

Comparing the students who participated in FYLCs (n = 297) to those who did not (n = 353), we found that there were not statistically significant differences on most demographic and academic preparation variables. There were no significant differences on gender, ethnicity, membership in an under-represented group, citizenship status, coming from a low-income household, mother’s or father’s educational levels, or being the first in one’s family to attend college. Furthermore, there were no significant differences between those who chose to participate in FYLCs and those who did not on SAT and ACT test scores.

Of all the measured individual background factors, only one differed significantly between participants and non-participants. Students who elected FYLCs had slightly higher high school grade point averages (3.55) than those who did not (3.49).

Almost all of the predictable variation in the probability that a student selects FYLC program participation was due to administrative and recruiting factors. There were some notable differences by academic major in the likelihood of program participation.

Table 2. Academic majors with high and low rates of participation in first year learning communities (percent of students in the major who were program participants)*	
High participation	Low participation
Computer engineering (85%)	Sociology (10%)
Mechanical engineering (73%)	Mathematics (31%)
Computer science (62%)	Psychology (36%)
CNAS Life sciences (58%)	Pre-business (36%)
CHASS undeclared (52%)	Biology (39%)
* Among majors enrolling ten or more students.	

The college in which a student was enrolled also had effects on the likelihood of participation in FYLC, above and beyond the specific major. The overall rate of participation in the College of Engineering was highest (76.1%), at the campus average for the College of Natural and Agricultural Sciences (45.1%), and below the campus average for the College of Humanities, Arts, and Social Sciences (39.9%).

Students who were residential on campus had higher participation (49% versus 37%). And, program participants were enrolled for more units (15.1 versus 14.5).

The choice of participating in a first-year learning community is not highly predictable, despite the differences discussed above. All of the significant factors, taken together, explain about 23% of the variation in the probabilities that students will elect FYLCs. About two-thirds of the variation that is predictable, is due to major; an additional quarter is due to college. Enrolling for more units and being resident on campus together account for about ten percent of the variation. High school GPA, while statistically significant, contributes little.

The evidence suggests that administrative factors and recruitment efforts at the department and college levels are, by far, the most important determinants of who participated in FYLCs. It does not appear to be the case that differences in demographics or academic preparation are important in explaining who chooses FYLCs.

Community participation and engagement outcomes.

The primary research question is whether learning community participation is associated with a variety of different outcomes related to program goals. It is useful to classify these goals into four domains that have commonly be used in the discourse on student engagement: student-faculty contact, active/collaborative learning, academic challenge, supportive environment, and enriching experiences.

Below, we will briefly report tests of differences between those who participated in first-year learning communities, and those who did not. There were some differences between participants in the survey and non-participants. And, some types of survey respondents were more likely than others to participate in communities. In testing differences between program participants and non-participants, we statistically adjust for those factors (except detailed major) that are associated with responding to the survey, or the choice to participate in a learning community. This procedure may produce estimates of program effects that are less biased by selection effects, and results that may be more valid when generalized to the whole population of first-year students.

Engagement: Student-faculty contact

Respondents were asked how frequently (on a scale from 0 = never to 7 = several times a week) they met with faculty in office hours. FYLC participants reported more contact (adjusted mean of 2.4 versus 2.2, $p = .055$. All significance levels discussed in this report are one-tailed tests). Respondents were also asked how many faculty they had met with in office hours. FYLC participants reported a larger number of contacts (3.13 versus 2.49, $p < .001$).

When asked whether FYLC classes were better, worse, or no different from non-FYLC classes in getting to know faculty, 36% reported better and only 9% worse ($p < .05$).

FYLC participants were slightly more likely to have contact with teaching assistants. Participants did not differ significantly from non-participants in the frequency of contact

about course materials (2.41 versus 2.37 on the scale from 0 = never to 7 = several times a week). Meeting with the TA to discuss the class or the major was slightly more common for FYLC participants (1.57 versus 1.45, $p = .07$, on the same scale).

When asked whether FYLC classes were better, worse, or no different from non-FYLC classes in getting access to and engagement with TAs 36% reported better and only 9% worse ($p < .05$).

Engagement: Active/collaborative learning.

Participants in FYLC programs reported that they were more likely to have worked on a group project (69% versus 61%, $p = .015$). However, program participants were significantly less likely to participate in spontaneous study groups (29% versus 39% for non-FYLC participants, $p = .007$). Further, there was no meaningful difference in the reported frequency of meeting with other students in general (program participants = 3.30 versus non-participants = 3.31 on a scale from 0 to 7).

When asked whether FYLC classes were better, worse, or no different from non-FYLC classes in forming engagement with other students, 61% reported better and only 8% worse ($p < .05$). 59% reported that FYLC classes were better for forming a sense of community in the class, and for making friends and finding study partners (all statistically significant).

FYLC programs, in some cases, sought to increase the social diversity of contacts among students. The likelihood that a FYLC participant worked in a group with students they regarded to be of “different backgrounds” was .39, versus .31 for non-FYLC group contacts ($p = .017$).

Engagement: Academic challenge.

Respondents to the survey were also asked about their engagement with their classes. The scales ranged from zero (never did this) to five (did this very often).

	FYLC participants	Non-participants
Contributed to class discussion	2.91	2.87
Did more work than required*	2.05	1.90
Read optional readings	1.61	1.54
Brought up materials from other classes*	2.21	1.90
Revised to improve writing	3.17	3.07
Learned something that changed thinking*	3.43	3.05
* significant difference in adjusted means at $p < .05$		

Participants in FYLC programs and classes consistently reported higher levels of engagement with their coursework, controlling for gender, college on-campus residence, High school GPA, transfer units, and enrolled units.

Engagement: Supportive campus environment.

FYLC programs have the goal of making students more aware of, and more likely to use supplemental resources.

The level of awareness of each of the supplemental academic services we surveyed students on was reported to be significantly higher among FYLC program participants.

	FYLC participants	Non-participants
Study skills workshops	89.9%	80.2%
Drop-in tutoring	97.3%	96.3%
Residence hall tutoring	84.8%	79.1%
Peer mentors	83.8%	76.6%

Among respondents who were aware of these resources, FYLC participants were significantly more likely to report using them (with the exception of residence hall tutoring).

	FYLC participants	Non-participants
Study skills workshops	42%	22%
Drop-in tutoring	50%	36%
Residence hall tutoring	15%	12%
Peer mentors	36%	11%

Respondents were also asked if FYLC courses and programs were more or less effective than non-FYLC courses in easing their transition to the university. 51% rated FYLC favorably, and only 9% unfavorably.

Engagement: Enriching educational experiences.

FYLC programs also seek to promote student engagement with the non-class activities available on campus. Respondents were asked whether they had ever engaged in a number of different activities. Table 6 shows the percentage of FYLC participants and non-participants who had engaged a number of campus resources outside the classroom. An asterisk is shown if the difference between the two groups is statistically significant when adjusting for other variables (by binary logistic regression).

Table 6. Percent reporting ever participating in activities		
	FYLC participants	Non-participants
Intercollegiate athletics*	49%	41%
Intra-mural athletics	23%	20%
Play or cultural event*	67%	61%
Art exhibit	20%	17%
On-campus movie*	52%	39%
On-campus public lecture*	49%	38%
Student organization*	70%	59%
Student newspaper	82%	82%
* statistically significant difference in log-odds, adjusting for gender, college, on-campus housing, enrolled units, HS GPA, and transfer units.		

When asked to compare their FYLC class or classes to others, 39% of program participants rated the classes as promoting participation in campus activities more favorably (and only 6% rated them worse).

Would you recommend UCR?

We have seen that FYLC participants are generally more engaged with the university community and their academic work. Does this experience translate into a more positive view of the institution?

Respondents were asked if they would recommend U.C.R. to a friend. Eighty-five percent of FYLC participants would, in comparison to eighty-two percent of non-participants (not statistically significant). While the rates are impressive for both groups, the difference is not large.