

Learning & Living-Learning Communities:

Student Success Outcomes for the

Fall 2022 First-Time Full-Time Freshmen Cohort

CSU Channel Islands, Office of Institutional Research

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Fast Facts

1. During the 2022-23 academic year there were 19 Learning & Living-Learning Communities – or (L)LCs – at CSUCI, serving 299 students (289 first-time full-time (FTFT) freshmen): 10 were Learning Communities and 9 were Living-Learning Communities. (L)LCs are considered High Impact Practices (HIPs), in that they are a teaching and learning practice that research has shown is associated with educational benefits for all students, but particularly students from groups that have been historically underserved by higher education. In fact, CSUCI's (L)LCs often combine two or more HIPs or emerging-HIPs beyond the learning community itself.

2. The 2022-23 (L)LCs served a higher proportion of students from groups that have been historically underserved by higher education: Nearly half (48%) of the Fall 2022 FTFT cohort participated in (L)LCs. In Fall 2022, (L)LCs served more students from demographic groups that have been historically underserved by institutions of higher education than their overall FTFT population at CSUCI, including more students from historically underrepresented race and ethnic groups, Pell eligible students, and students who have the opportunity to be the first in their family to graduate from a four-year college or university. Nearly all (88%) Black/African American FTFT students participated in (L)LCs.

3. Fall 2022 FTFT students who participated in (L)LCs had better first-term and first-year outcomes than their non-(L)LC participating peers: Overall, the Fall 2022 FTFT cohort struggled academically by most measures. However, descriptive statistics show that Fall 2022 FTFT students who participated in (L)LCs had better first-term and first-year outcomes than their non-(L)LC participating peers. For most measures of academic success, the benefit of (L)LC participation was even greater for students from groups that have been historically underserved by higher education.

4. Propensity score analysis shows that (L)LC participation is significantly associated with most student success outcomes (see below):

- higher probability of achieving sophomore status by the start of the second year,
- increased units attempted and completed in the first term and first year,
- higher first-term and first-year GPA,
- lower number of DFWI grades in the first term,
- higher probability of being in good academic standing at the end of the first term and first year,
- higher probability of meeting with a staff academic advisor in the first year, and
- increased completion rate of the Golden Four GE requirements within the first year

Propensity score matching was used to statistically test the effect of (L)LC treatment using a quasi-experimental design where a (L)LC student was matched with similar non-(L)LC students to control for selection effects. These analyses show that (L)LC participation is significantly associated with the student success outcomes listed above. However, (L)LC participation among the Fall 2022 FTFT cohort was not significantly associated with a higher probability of retention (first-term or first-year) or fewer DFWI (non-passing) grades in the first year.

2022-23 (L)LCs

Learning & Living-Learning Communities



299 total students served
(289 first-time full-time freshmen)

48% of the Fall 2022 FTFT cohort
(first-time full-time freshmen)

19 (L)LCs

 **10 Learning**

 **9 Living-Learning**

research-based
High Impact Practices
> **(HIPs)**



HIPs are teaching & learning practices that have significant educational benefits for students, especially for groups that have been **historically underserved by higher education**

CSUCI's (L)LCs serve more FTFT students from these underserved groups

CSUCI's (L)LCs often combine two or more HIPs and emerging-HIPs:

- ✓ learning & living-learning communities
- ✓ first-year seminars
- ✓ embedded peer mentors
- ✓ diversity & global learning
- ✓ undergraduate research



87% of (L)LC students
AT LEAST 1: HUGs, Pell, and/or First-Gen

75% of non-(L)LC

76% of (L)LC students
AT LEAST 2: HUGs, Pell, and/or First-Gen

58% of non-(L)LC

47% of (L)LC students
ALL 3: HUGs, Pell, and First-Gen

35% of non-(L)LC

CSUCI's (L)LC students have **better first-term & first-year outcomes** when compared to non-(L)LC students on average, especially among historically under-represented race and ethnic groups (HUGs), Pell eligible, and first-generation students

(L)LC participation is significantly* associated with:

- * higher probability of achieving sophomore status by year 2
- * increased units attempted & completed in the 1st term & 1st year
- * higher 1st term & 1st year GPA
- * lower number of DFWI grades in the 1st term
- * higher probability of being in good academic standing at the end of the 1st term & 1st year
- * higher probability of meeting with a staff academic advisor in the 1st year
- * increased completion rate of Golden Four GE requirements within the 1st year

*propensity score matching was used to control for selection effects in (L)LC participation & test the statistical significance of (L)LC participation on student success outcomes



Background

Building on earlier analyses that demonstrated that Learning and Living-Learning Communities at California State University Channel Islands (CSUCI) were associated with increased student success measures, this report analyzes the first-term and first-year student success outcomes for the Fall 2022 first-time full-time (FTFT) freshmen cohort. Although the exact structure of CSUCI's [Learning and Living-Learning Communities \(\(L\)LC\)](#) has changed over time, in general, they consist of a group of students who take multiple classes together within their first year. Most (L)LCs are anchored by a first-year seminar course, often include an embedded peer mentor (EPM), and are built around a theme related to one of [CSUCI's four mission pillars](#) or other student identity and/or interest. In the case of [Living-Learning Communities](#), the same group of students also live together in one of the university's residence halls. (L)LCs are designed to support students' transition to CSUCI, support their academic success, and encourage student engagement at the university both within and beyond the classroom.

This data brief summarizes the key findings from an in-depth quantitative analysis of first-year student success outcomes for Fall 2022 FTFT students who participated in (L)LCs. Although (L)LCs are open to all new freshmen, this analysis is limited to first-time full-time freshmen who make up the majority of (L)LC participants. In addition to exploring key student success metrics, such as retention, units completed, GPA, and the completion of key General Education (GE) requirements, this analysis also explores differences across a variety of student characteristics in order to understand equity gaps within these outcomes. It is important to note that participation in a (L)LC is measured by enrollment in a (L)LC anchor course, which were primarily UNIV 150: First Year Seminar sections and one section of UNIV 198: Introduction to Interdisciplinary Research in Fall 2022. According to the American Association of Colleges and Universities and other research, Learning Communities are considered [High Impact Practices \(HIPs\)](#), suggesting that they are associated with educational benefits for all students, but particularly students from groups that have been historically underserved by higher education.¹ In fact, CSUCI's (L)LCs often incorporate HIPs and emerging-HIPs beyond the learning community itself, including first-year seminars, embedded peer mentors, diversity and global learning, and undergraduate research. This analysis explores to what extent CSUCI's (L)LCs benefit CSUCI students.

Fall 2022 FTFT Freshmen Cohort Demographics

In Fall 2022, 635 new freshmen matriculated at CSUCI, 95% of whom were FTFT students. Among those 602 FTFT students, 289 (48%) participated in one of nineteen (L)LCs. Compared to non-(L)LC FTFT students, (L)LC FTFT students in the Fall 2022 cohort were more likely to be from historically underrepresented race and ethnic groups (HUGs),² with 73% of (L)LC participants reporting a HUGs race/ethnicity compared to 65% of the non-(L)LC FTFT freshmen. Interestingly, this difference isn't solely driven by Latinx student participation which is typically a driving force in trends among HUGs students because CSUCI is a Latinx-majority institution. Black/African American students, although a relatively small population at CSUCI, were highly likely to participate in a (L)LC, with 88% of Black/African American FTFT in the Fall 2022 cohort enrolling in a (L)LC (22 of 25 Black/African American FTFT students). (L)LC students in the Fall 2022 cohort were also more likely to be

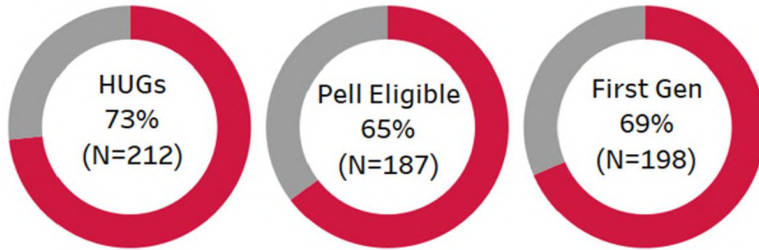
¹ In this analysis, groups that have been historically underserved by higher education include students from historically underserved race and ethnic groups (HUGs), students who are Pell eligible, and first generation college students.

² HUGs are historically underrepresented race and ethnic groups and include Black/African American, Hispanic/Latino, and Native American/Alaskan students. In older analyses, dashboards, etc., this group of students is sometimes referred to as underrepresented minorities (URM).



Pell eligible.³ (65% compared to 49%) and first-generation college students.⁴ (69% compared to 54%) than their non-(L)LC participating peers. In fact, Fall 2022 FTFT (L)LC participants were more likely to report at least one identity that has been historically underserved by higher education institutions (HUGs, Pell eligible, and/or first generation), with 87% of (L)LC students compared to 75% of non-(L)LC students having at least one

Figure 1. Learning & Living-Learning Fall 2022 FTFT Cohort Demographics



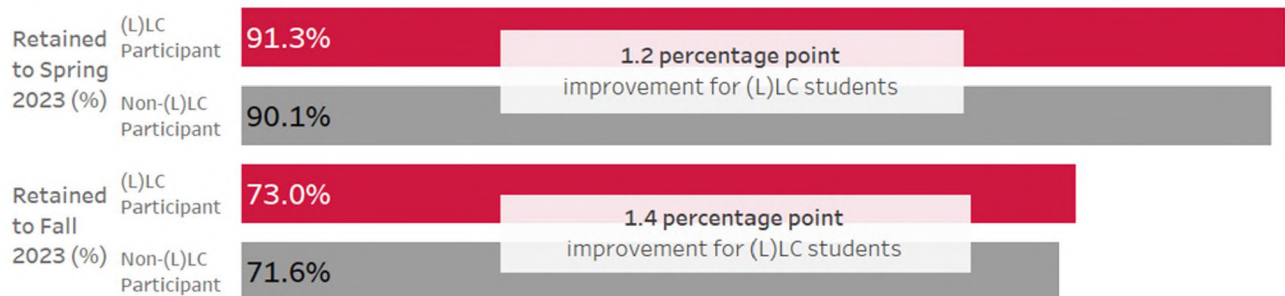
underrepresented characteristic. 76% of (L)LC participants report at least two of these characteristics (compared to 58% of non-(L)LC participants), while nearly half (47%) of (L)LC students report having all three characteristics (compared to just 35% of non-(L)LC participants) (see the bar chart on page 2 for more details).

First-Year Student Success Outcomes

First-Term & First-Year Retention

Fall 2022 FTFT students who participated in a (L)LC had slightly better one-term and one-year retention rates than their non-(L)LC peers. As Figure 2 indicates, among (L)LC FTFT students, 91.3% were retained from Fall 2022 to Spring 2023 compared to 90.1% of non-(L)LC FTFT students, an improvement of 1.2 percentage points. Similar trends persist when measuring retention from Fall 2022 to Fall 2023, with 73.0% of (L)LC FTFT participants retained compared to 71.6% of their non-(L)LC peers, an improvement of 1.4 percentage points. Examining retention rates across student characteristics demonstrates that (L)LC participation typically has a

Figure 2. First-Term and First-Year Retention by Learning & Living-Learning Community Participation, Fall 2022 FTFT Cohort



somewhat greater impact on retention for students from groups that have been historically underserved by institutions of higher education. Amongst HUGs, first-term retention is improved by 1.4 percentage points for (L)LC participants; first-year retention is improved by 1.7 percentage points (92.0% vs. 90.6% first-term retention and 73.1% vs. 71.4% first-year retention). Although the results are limited by a small population size (N=25), Black/African American students in the Fall 2022 FTFT cohort who participated in a (L)LC were far more likely than their non-(L)LC counterparts to be retained (100% vs. 66.7% first-term retention and 77.3% vs. 33.3% first-year retention). Pell eligible (L)LC participants also had better first-term and first-year retention

³ [Pell eligibility](#) is a proxy for low-income and is measured based on a students' expected family contribution (EFC) on the Free Application for Federal Student Aid (FAFSA).

⁴ In this analysis, first-generation college students are those who are among the first generation in their family to have the opportunity to graduate from a four-year college or university.

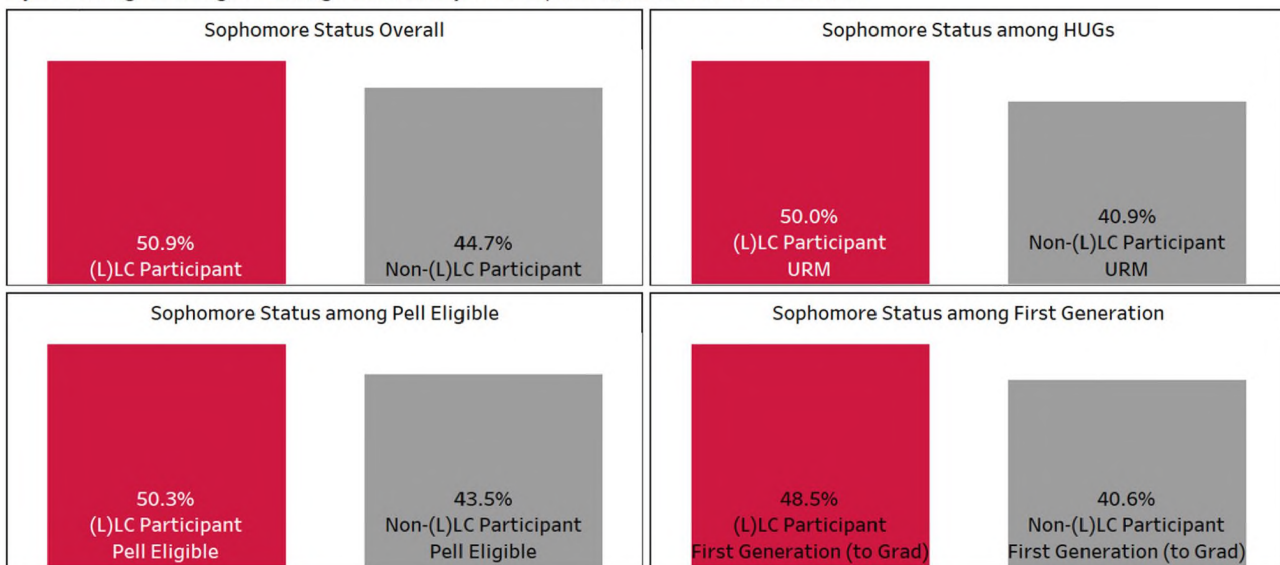


rates than their non-(L)LC participant peers (94.1% vs. 90.9% first-term retention and 72.2 vs. 70.1% first-year retention). We see similar patterns for first-generation students as well (91.9% vs. 89.4% first-term retention and 70.7% vs. 68.8% first-year retention). This suggests that (L)LC participation for the Fall 2022 FTFT cohort was associated with somewhat better retention rates, particularly for students from groups that have been historically underserved by higher education. It's important to note, however, that the overall Fall 2022 FTFT retention rates represent a decline from previous FTFT cohorts.

Sophomore Status & Units Completed

As with retention, the Fall 2022 FTFT cohort struggled academically by most measures when compared to other recent cohorts. (L)LC participation is associated with better academic outcomes, such as sophomore status, units attempted, and units completed, for this Fall 2022 cohort. For example, 48% of the Fall 2022 FTFT cohort achieved sophomore status by the end of their first year. However, as figure 3 shows, 51% of (L)LC participants achieved sophomore status compared to 45% of non-(L)LC participants. This pattern holds for HUGs (50% vs. 41%), Pell-eligible (50% vs. 44%), and first-generation students (49% vs. 41%), with (L)LC students more likely to reach sophomore status than non-(L)LC students across these groups that have been historically underserved.

Figure 3. Sophomore Status by End of First Year
by Learning & Living-Learning Community Participation, Fall 2022 FTFT Cohort

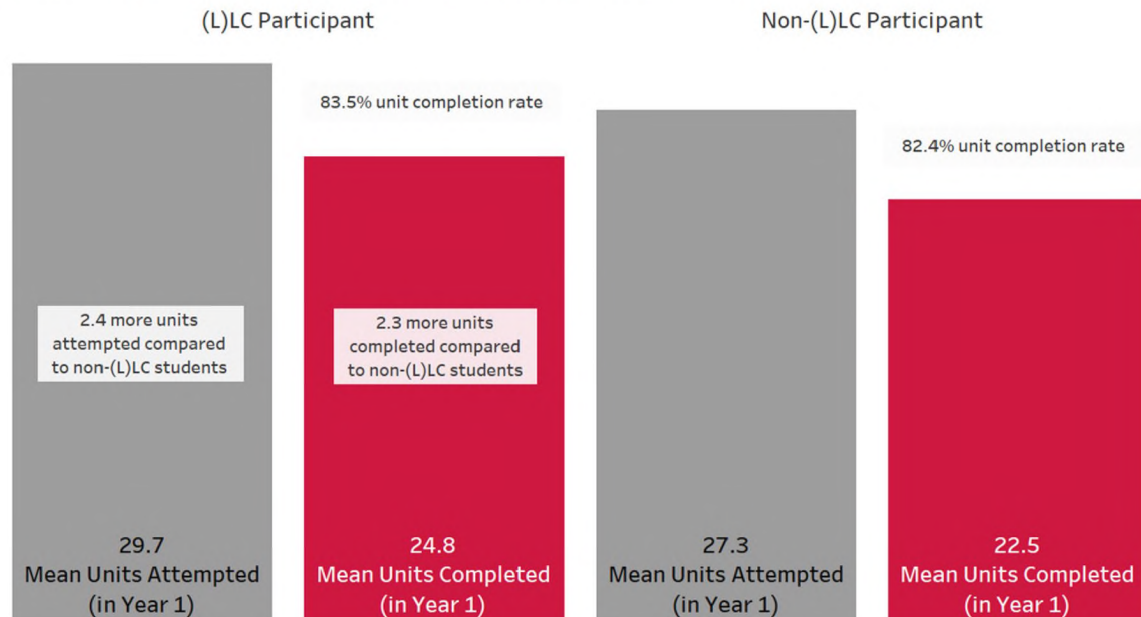


(L)LC participation is also associated with more units attempted and completed within both the first-term and first-year for FTFT students. Among the Fall 2022 FTFT cohort, (L)LC students attempted 14.4 units and completed 12.1 units, on average within their first fall semester. Non-(L)LC students attempted 14.1 units and completed 11.3, on average. Not only were (L)LC students taking slightly more units, on average, they were also completing more units within the first semester. The gap between (L)LC and non-(L)LC continues throughout the first year for the Fall 2022 FTFT cohort, with (L)LC participants attempting 29.7 units and completing 24.8 units, on average, compared to 27.3 units attempted and 22.5 units completed among non-(L)LC participants (see Figure 4). It's important to note that although (L)LC participants attempt 2.4 more units and complete 2.3 more units, on average within the first year, there is a minimal difference in their unit completion rate (i.e. units completed relative to units attempted), with (L)LC participants completing 83.5% of their units attempted compared to 82.4% of a non-(L)LC participants (a 1.1 percentage point difference). In



other words, (L)LC students attempt more units, on average, and that is what is responsible for their higher average units completed, as opposed to these students having more successful course outcomes, as measured by the proportion of units completed to units attempted. As with previous outcomes, these trends hold for students from groups that have been historically underserved by institutions of higher education.

Figure 4. First-Year Units Attempted & Completed
by Learning & Living-Learning Community Participation, Fall 2022 FTFT Cohort



DFWI Rates, GPA, & Academic Standing

Of course, units completed relative to units attempted is driven by the number of unsuccessful course outcomes a student has. Although (L)LC participants in the Fall 2022 cohort had slightly fewer DFWI⁵ grades than non-(L)LC participants in their first semester (1.1 vs. 1.2), the slight gap between (L)LC and non-(L)LC participants reverses when looking at the average number of DFWI grades in the first year (2.2 vs. 2.0). This suggests that (L)LC students achieving sophomore status at a higher rate and completing more units, on average, within the first year is a result of attempting more units rather than having more successful course outcomes. Again, these patterns hold for HUGs, Pell eligible, and first-generation students. It should be noted that although the main (L)LC anchor classes – UNIV 150 – had a DFWI rate below 20% in Fall 2022, it has grown in recent years among FTFT students (during Fall semesters the DFWI rate was below 10% prior to Fall 2020 and 15% or higher since then). Although the DFWI rate alone isn't a call for concern, for the Fall 2022 FTFT cohort UNIV 150 ranked second in terms of having the largest DFWI impact, with 41 students earning a DFWI grade. This high impact is driven by the high enrollment of FTFT students, and will likely to continue to grow given current DFWI trends as the (L)LCs expand to serve more FTFT students.

(L)LC participation is also associated with slightly higher grade point averages (GPAs) in the first term and first year, however. (L)LC participants finished their first semester with a 2.70 GPA compared to 2.51 among non-(L)LC participants. They finished their first year with a GPA of 2.60 compared to 2.56 among non-(L)LC participants. This suggests a slight GPA-boosting effect of (L)LC participation in the first semester, but the gap between (L)LC and non-(L)LC participant GPA within the first year essentially disappears. This also suggests

⁵ DFWI grades are a measure of unsuccessful course outcomes and includes grades of D+, D, D-, F, NC, W, WU, I, and IC.



that although there wasn't much difference in the number of courses had unsuccessful outcomes in, (L)LC students earned higher grades, on average, in their first semester. The GPA-boosting impact of (L)LC participation compared to non-(L)LC peers, especially in the first semester, is stronger for HUGs (2.64 vs 2.34 first-term GPA), Pell eligible (2.64 vs. 2.34 first-term GPA), and first-generation students (2.65 vs. 2.39 first-term GPA).

Relatedly, (L)LC students were also more likely to be in good academic standing at the end of their first term (76%) compared to non-(L)LC students (66%). Although the benefit of (L)LC participation on academic standing is not as impactful when looking at good academic standing at the end of the first year (75% vs. 70%), (L)LC participants were less likely to be academically disqualified in their first year as compared to their non-(L)LC counterparts (9% vs. 13%) and somewhat less likely to receive academic notice (17% vs 18%). As explored elsewhere in this report, these trends hold for students from historically underserved groups – HUGs, Pell eligible, and first-generation students.

Other Student Success Outcomes

(L)LC participation is associated with other student success outcomes as well. For example, (L)LC students in the Fall 2022 FTFT cohort were more likely to attempt and complete their written communication (A2) GE requirement in their first year. There was no discernable difference in quantitative reasoning (B4) GE attempt and completion rates between (L)LC and non-(L)LC students, however. For the Fall 2022 cohort, UNIV 150 and UNIV 198 – the (L)LC anchor courses – fulfilled the critical thinking (A3) GE requirement. As a result 100% of (L)LC students attempted their A3 requirement and 89% completed it⁶, compared to just 58% of non-(L)LC students who attempted an A3 course in their first year and 48% completed it. (L)LC students are also more likely to attempt and complete their oral communication (A1) GE requirement within the first year compared to non-(L)LC students. Overall, (L)LC participants are slightly more likely to have completed their A2/B4 GE requirements within their first year⁷, but they are even further along in completing their [Golden Four requirements](#) (A1, A2, A3, B4), largely due to their (L)LC participation including an A3 course.

Although most FTFT students now matriculate at CSUCI having declared a major, we know that for undeclared majors, declaring a major by the start of their second year is associated with better academic outcomes. Just 23 students in the Fall 2022 cohort entered as undeclared and more than half (70%) of those students participated in a (L)LC. 63% of undeclared (L)LC students declared a major by the start of their second year, compared to 57% of non-(L)LC students.

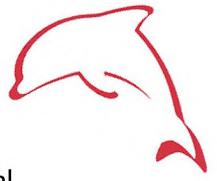
Finally, (L)LC participation is associated with greater orientation to student support services at CSUCI, primarily through their [embedded peer mentor \(EPM\) and Dolphin Interest Group \(DIG\)](#), which are co-curricular learning communities lead by their EPM. 81% of (L)LC participants met with a professional staff advisor during their first year, compared to 69% of non-(L)LC participants. These percentages increase to 92% and 83% when peer academic advisors are included in the analysis.

Statistical Testing of (L)LC Treatment Effects

The analysis presented above demonstrates that (L)LCs at CSUCI serve more students from groups that have been historically underserved by higher education and that (L)LC participation is positively associated with a number of student success outcomes in the Fall 2022 FTFT cohort. The analyses above, however, are unable to

⁶ This A3 completion rate doesn't perfectly align with the DFWI rate in UNIV 150 because some Fall 2020 FTFT students completed their A3 requirement with other A3 courses.

⁷ The completion of A2 and B4 courses is of particular interest because of the [CSU Chancellor's Office Executive Order \(EO\) 1110](#) as well as recommendations under the [CSU's Graduation Initiative 2025](#) aimed at improving graduation rates and closing equity gaps.



determine if these educational benefits are a result of participating in a (L)LC or the result of other, unmeasured differences between (L)LC students and non-(L)LC students. To account for these potential selection effects, the analysis that follows uses propensity score matching. Propensity score matching creates a quasi-experimental research design in which individuals receiving a “treatment” – in this case (L)LC participation – are matched across a variety of characteristics to individuals who did not receive the “treatment.” That match is based on a students’ likelihood (i.e. propensity) for also receiving the treatment (i.e. participating in a (L)LC). This means that the effect of the treatment on the outcomes, rather than the effect of other confounding variables, can be identified.

All 289 (L)LC students in the Fall 2022 FTFT cohort were matched with a non-(L)LC participating students from the same cohort. Student were matched on a number of characteristics measured prior to their matriculation at CSUCI (high school GPA, gender, HUGs, Pell eligible, and first-generation) as well as an indicator variable for whether or not they were a STEM major. Students were not matched on their first-term or first-year characteristics (e.g. first-term GPA), because those are the outcomes this analysis is trying to predict.⁸ This matched sample shows that participating in a (L)LC is significantly⁹ associated with:

- higher probability of achieving sophomore status (by the start of the second year)**
- increased units attempted (both in the first term* and first year***)
- increased units completed (both in the first term** and first year**)
- higher CSUCI GPA (at the end of the first term*** and first year**)
- lower number of DFWI grades (in the first term**)
- a higher probability of being in good academic standing (at the end of the first term*** and first year*)
- a higher probability meeting with a staff academic advisor** (within the first year)
- increased completion rate of Golden Four GE requirements*** (increased completion of A1***, A2*, and A3*** requirements independently as well)

However, (L)LC participation is not significantly associated with:

- first-term retention (Fall 2022 to Spring 2023)
- first-year retention (Fall 2022 to Fall 2023)
- number of DFWI grades (in the first year)
- completion rate of A2/B4 GE requirements under EO 1110 (and B4 requirement independently)

Future Directions

The analysis presented above focused on first-term and first-year outcomes for (L)LC participants in the Fall 2022 FTFT cohort. Future analyses should include multiple cohorts, in order to be able to analyze the impact of Living-Learning and Learning communities separately. With a large enough population (i.e. multiple cohorts), it’s possible that the impact of each specific (L)LC theme could also be analyzed (e.g. the Michele Serros Community compared to the Golden Dolphins Integrative Community). Including additional cohorts will also allow for the analysis of outcomes beyond the first year, such as achieving junior status as well as four- and six-year graduation rates. This will also help account for the particular circumstances of the Fall 2022 cohort and the role the pandemic and their academic struggles played in the results presented here. Current plans are underway for better identifying (L)LC courses and participation in CSUCI’s institutional data. This will allow for the analysis of the impact beyond the anchor course. For example, a comparison of class section

⁸ Students’ first-term and first-year characteristics could not be included in the analysis because those occurred after enrollment in a (L)LC – the treatment in this research design.

⁹ Asterisks (*) indicate statistically significant findings: * p<0.05, ** p<0.01, ***p<0.001. One asterisk (*) indicates less than 5% chance of error due to sampling error, two asterisks (**) indicate less than 1% chance of error, and three asterisks (***) indicate less than 0.1% chance of error.



outcomes for students in the MVS Social Impact International LC in ECON 110 compared to all non-LC sections of ECON 110. Having additional course and class section data will also allow for analyses that explores any potential interaction effects between (L)LC course-specific outcomes and other student success measures such as retention.

An additional limitation of this analysis is that it is unable to identify how deeply embedded learning community pedagogy is in a given (L)LC or the impact of a faculty member and their participation in (L)LC or other pedagogically-based training. Future analysis could include qualitative coding of (L)LC syllabi as well as controlling for faculty members in quantitative analyses. Similar analyses could be undertaken explore differences in EPM-(L)LC student connections as an explanatory factor for differences across (L)LCs.

Finally, although we are able to analyze the treatment effects of a single program or intervention – in the case of this report, (L)LCs – additional analysis should explore differences in impact across interventions. Examining multiple interventions simultaneously would also allow for an exploration of which students are receiving multiple interventions and which students may be receiving none as well as the collective impact multiple interventions may have on student success. Beyond improving student success outcomes, one of the goals of programs and interventions such as (L)LCs is to close equity gaps across student groups. An analysis across these programs and interventions would also allow for the use in interaction models to explore not just the treatment effect of interventions individually or in combination, but also explore how that impact may differ across groups. In other words, we would be able to explore the potential each intervention has for not just improving student success, but also closing equity gaps with statistical models.

Additional Learning and Living-Learning Community Resources

For questions about CSUCI's Learning and Living-Learning Community data and analysis, please contact Dr. Kristin M. Jordan at kristin.jordan@csuci.edu.

For general information about Learning and Living-Learning Communities at CSUCI, please see the [Learning and Living-Learning Communities website](#). Specific inquiries about Learning Communities should be directed to Dr. Kathleen Klompier at kathleen.klompier@csuci.edu. Specific inquiries about Theme and Living-Learning Communities should be directed to Dr. Gary C. Gordon II at gary.gordon@csuci.edu.