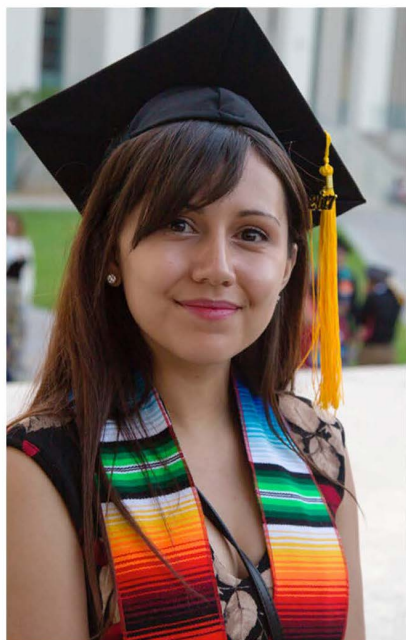


Student Success Report 2019

PCCPATHWAYS

Leading Latinx
Students to Success



A Comparison of Pathways and Non-Pathways Students from
the 2015-2016 Cohort with a Focus on Latinx Student Performance

Christina Christie, Ph.D.
UCLA Social Research Methodology Evaluation Group

Patricia Quinones, Ph.D.
Dean, Office of Instructional Effectiveness
West LA College

Adrienne Dellinger
Graduate School of Education
UCLA



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2019 PCC STUDENT SUCCESS STUDY EXECUTIVE SUMMARY

This study looks at the impact of Pasadena City College's PCC Pathways program on students overall, and specifically, on Latinx students compared to non-Pathways students from the 2015-16 cohort. The study focused on five key student success indicators: **cumulative credits earned, fall-to-fall persistence, transfer-level math and English completion, transfer status, and completion.**

MAJOR FINDINGS

On all five success indicators, Pathways student outperformed non-Pathways students. Not only does Pathways enrollment result in greater success for students, but Latinx students outperformed their Latinx non-Pathways peers on all indicators as well. However, even with these successes, an equity gap between Latinx students and their peers exists within PCC overall and in the Pathways program.

- **Credits:** Pathways students earned significantly more credits each year than non-Pathways students.
- **Persistence:** A higher proportion of Pathways students persisted from the first to the second year compared to non-Pathways students.
- **Completion of transfer math & English:** A higher proportion of Pathways students completed transfer-level math and English compared to non-Pathways students.
- **Transfer status:** At the end of their third year, a higher percentage of Pathways students had achieved transfer-prepared and transfer-ready status compared to non-Pathways students.
- **Completion:** A higher percentage of Pathways students received a degree or transferred to a four-year institution at the end of three years compared to non-Pathways students.

Overall, Pathways students, and specifically Latinx students, earned more cumulative and transferable credits than non-Pathways students every year over three years. This builds upon initial increased outcomes reported in the 2015 Pathways Success Study: students in the 2015-2016 cohort, tracked in the current study, demonstrated increases for all five success indicators compared to the cohort in the previous study (see pg.12).

METHODS

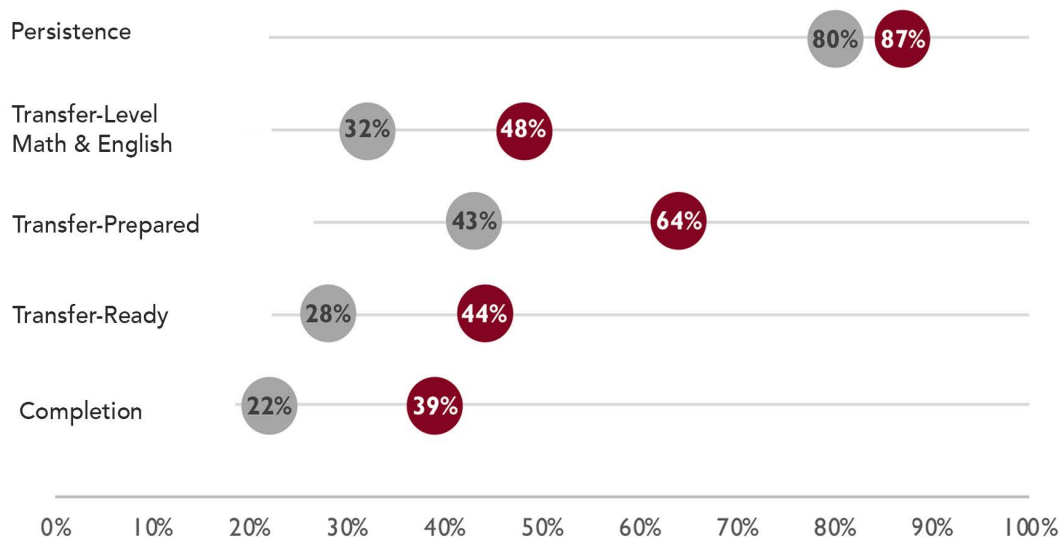
This study focuses on a sample of first-time, first-year Pathways and non-Pathways students in the 2015-2016 cohort at Pasadena City College (PCC). Comparisons between these two groups, with an additional focus on Latinx students, were conducted to examine differences on five key student success indicators.

DATA

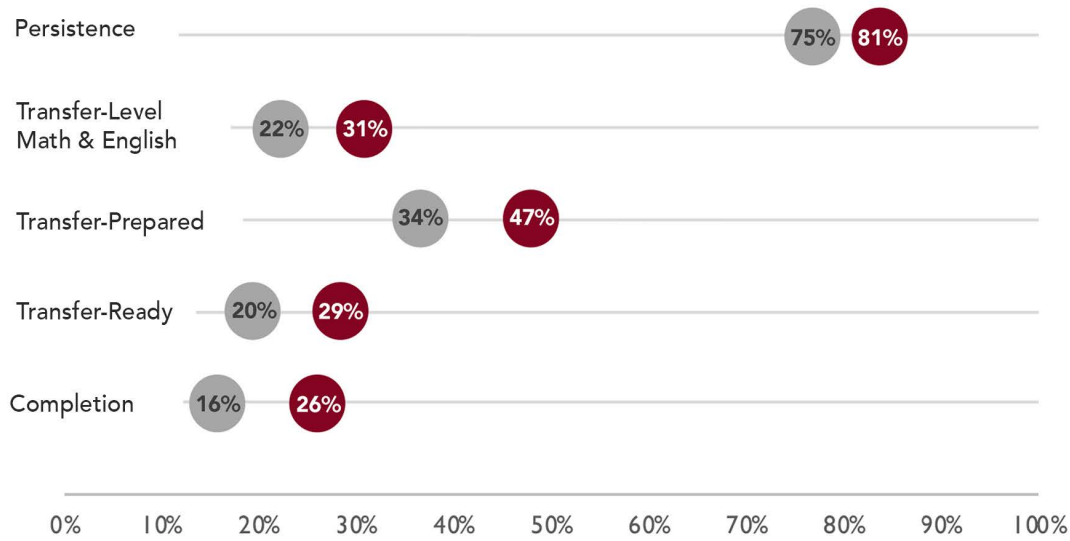
Data utilized in this report were provided by the Office of Institutional Effectiveness (OIE) at PCC. A sample of Pathways students and non-Pathways were defined. The final sample sizes were 1,136 for Pathways and 761 for the non-Pathways comparison group. The two groups were similar in terms of age, gender, and ethnicity, but Pathways students were more likely to live in-district. Latinx students accounted for approximately half of each group in this study.

SUMMARY OF OUTCOMES

Pathways students had higher rates of achievement on all success indicators compared to non-Pathways students.



Latinx Pathways students outperformed their Latinx non-Pathways peers on all success indicators.



Non-Pathways
Pathways

CURRENT STUDY

This study focuses on a sample of first-time, first-year Pathways and non-Pathways students in the 2015-2016 cohort at Pasadena City College (PCC). Information on the Pathways program can be found in the Appendix. Data analyses were conducted to examine differences on five key student success indicators: **cumulative credits earned, persistence, transfer level math and English completion, transfer status, and completion.** This report provides findings of analyses comparing these two groups overall, as well as highlighting the success of Latinx Pathways students compared to their Latinx non-Pathways peers on each indicator.

The five key questions addressed in this study:

1. Are there mean differences between Pathways and non-Pathways students (or for Latinx, specifically) on cumulative and transferable credits earned at the end of their first, second, and third years?
2. Are there proportional differences between Pathways and non-Pathways students (or for Latinx, specifically) regarding fall-to-fall persistence from year one to year two?
3. Are there proportional differences between Pathways and non-Pathways students (or for Latinx, specifically) regarding completion of transfer-level math and English?
4. At the end of three years, are there proportional differences between Pathways and non-Pathways students (or for Latinx, specifically) on reaching transfer-prepared and transfer-ready status?
5. At the end of three years, are there proportional differences between Pathways and non-Pathways students (or for Latinx, specifically) on completion (degree attainment or transfer to four-year institution)?

SAMPLES

PCC Office of Institutional Effectiveness (OIE) data were utilized to identify a sample of Pathways students and non-Pathways students as a comparison group. Only students who met the following criteria were included in the analyses:

- First-time students at PCC in fall 2015
- 18 years of age or had graduated high school in 2015
- Attempted full-time units in the fall and spring semesters of their first year
- Had not earned any units prior to fall 2015

The final sample sizes were **1,136 for Pathways** and **761 for the non-Pathways** comparison group. The two groups were similar in terms of age, gender, and ethnicity, but Pathways students were more likely to live in-district. In both groups, students who identified as Latinx represent approximately half (50% non-Pathways comparison and 48% Pathways), which aligns with PCC's student population overall.

Pathways and non-Pathways students in this study did not differ demographically, with Latinx students representing half in each group.

Demographic	Non-Pathways Comparison (n=761)	Pathways (n=1,136)
Age (Average)	18	18
Gender		
Female	49%	53%
Male	51%	48%
Ethnicity		
Asian	31%	33%
Black/African American	2%	2%
Hispanic/Latinx	50%	48%
Pacific Islander	0%	0%
Two or more	3%	3%
White	11%	11%
Unknown/not reported	5%	4%
Residency *		
In-District	15%	42%
Other	85%	59%

Note: Percentages may not add up to 100% due to rounding and not displaying the percentage of those who did not provide gender or ethnicity information.

***Residency** - when a student started at PCC; may not be current if students have moved in the past two to three years.

Other includes: AB540, in-state resident, international, out-of-state, and undeclared statuses.

FINDINGS

Analyses comparing Pathways and non-Pathways students were conducted based on the five key student success indicators: **cumulative credits earned, persistence, transfer level math and English completion, transfer status, and completion**. Findings are presented with comparisons between the two group as well as those specific to Latinx students.

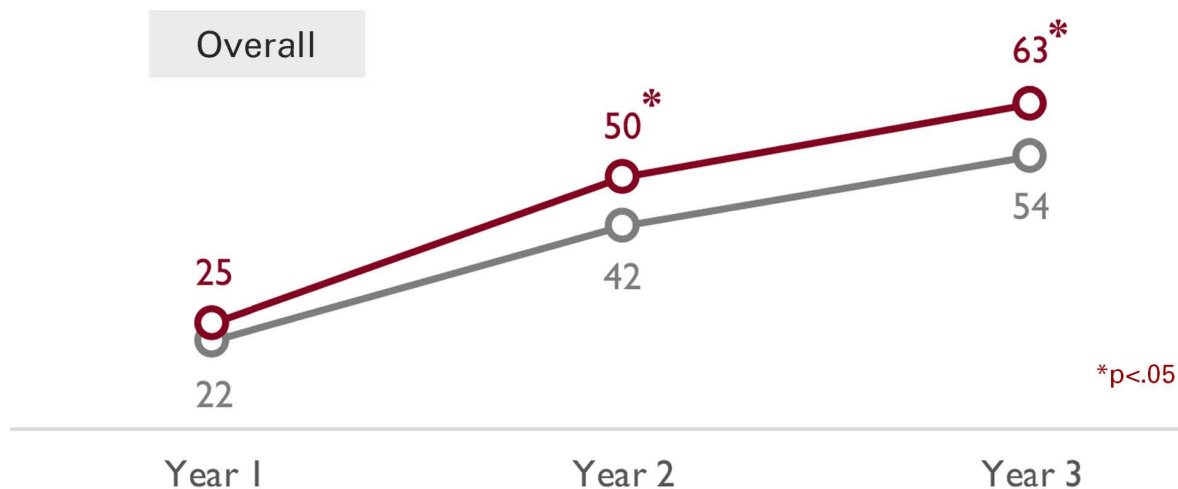
CUMULATIVE CREDITS EARNED

Cumulative credits earned by the end of each academic year were calculated for all students. Mean differences were assessed at the end of the first, second, and third years.

Overall, Pathways students earned more credits per year on average than their non-Pathways peers. There were statistically significant mean differences in the number of cumulative credits earned at the end of the second and third academic year for Pathways compared to non-Pathways students.

On average, Pathways students earned approximately three credits more by the end of their first year, approximately eight more credits by the end of their second year, and approximately nine more credits by the end of their third year, compared to non-Pathways students. Mean differences between Pathways and non-Pathways students at the end of the second and third year were statistically significant.¹ Statistical results indicate that mean differences between the two groups are not likely due to chance. Latinx Pathway students earned more credits by the end of their first, second, and third year compared to Latinx students not in Pathways. These differences were statistically significant.²

Pathways students earned more credits than non-Pathways students.

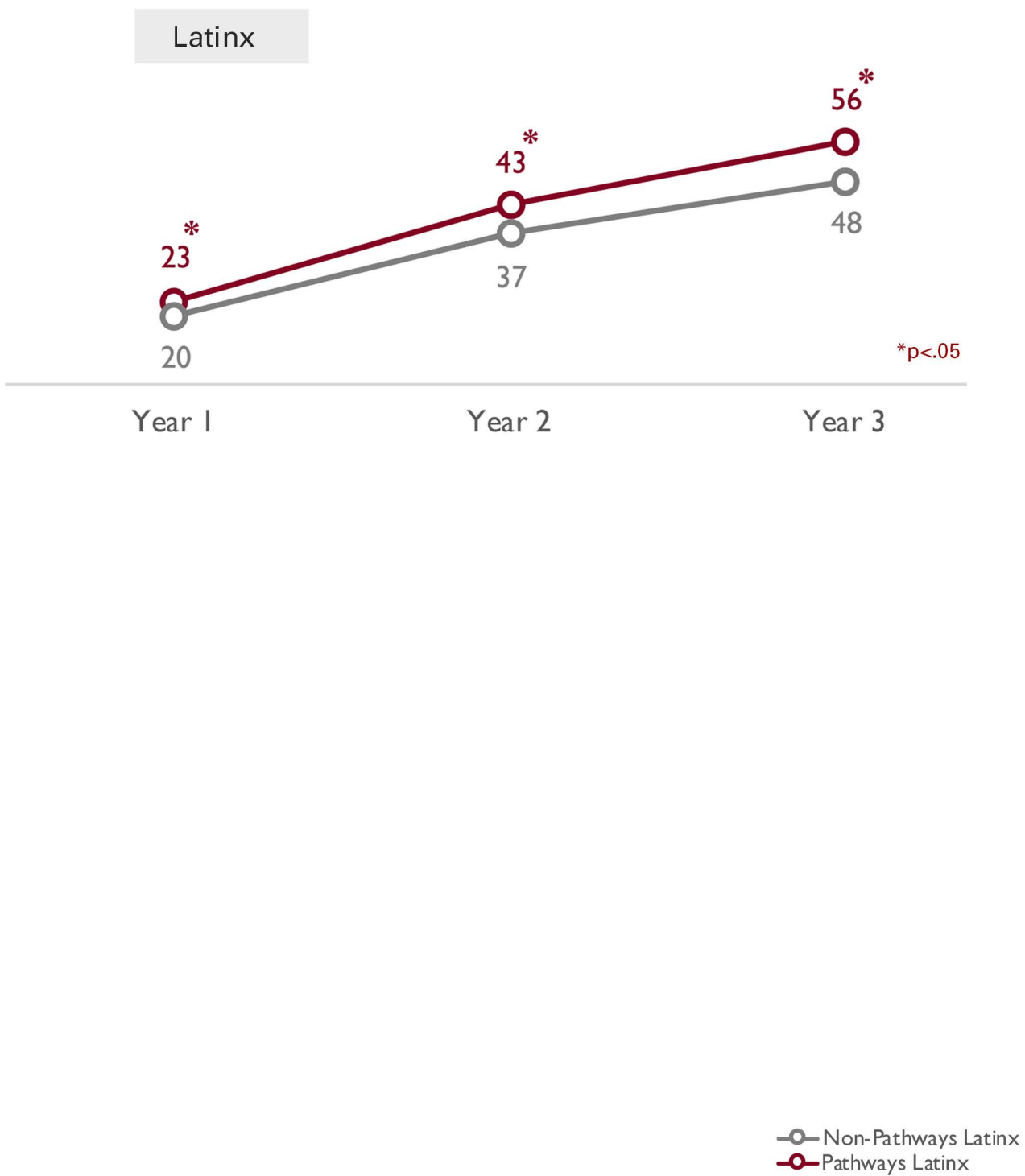


¹ $F(1, 1895) = 37.82, p < .05$

² $F(1.2, 1117.77) = 14.16, p < .05$

—○— Non-Pathways Latinx
—●— Pathways Latinx

Latinx Pathways students earned more credits than non-Pathways Latinx students.



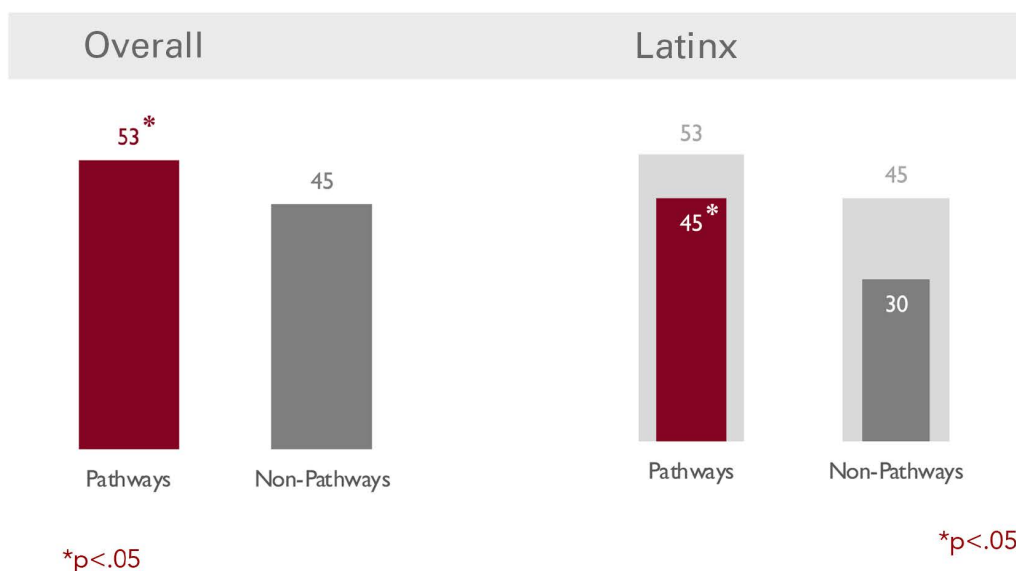
TRANSFER CREDITS EARNED

Further analyses into credits earned by Pathways and non-Pathways students were conducted to assess whether there were differences in transferable credits earned.

Overall, Pathways students earned, on average, 53 transfer credits by the end of their third year compared to an average of 45 transfer credits earned by non-Pathways students. The results were statistically significant.³ For Latinx students, those in Pathways earned an average of 45 transfer credits and those not in Pathways earned an average of 30 transfer units. The results were statistically significant.⁴

Pathways students earned more transfer credits than non-Pathways students.

Latinx Pathways students earned, on average, fifteen more transfer credits than Latinx students not in Pathways.



³ $t(1605) = -7.33, p < .05$

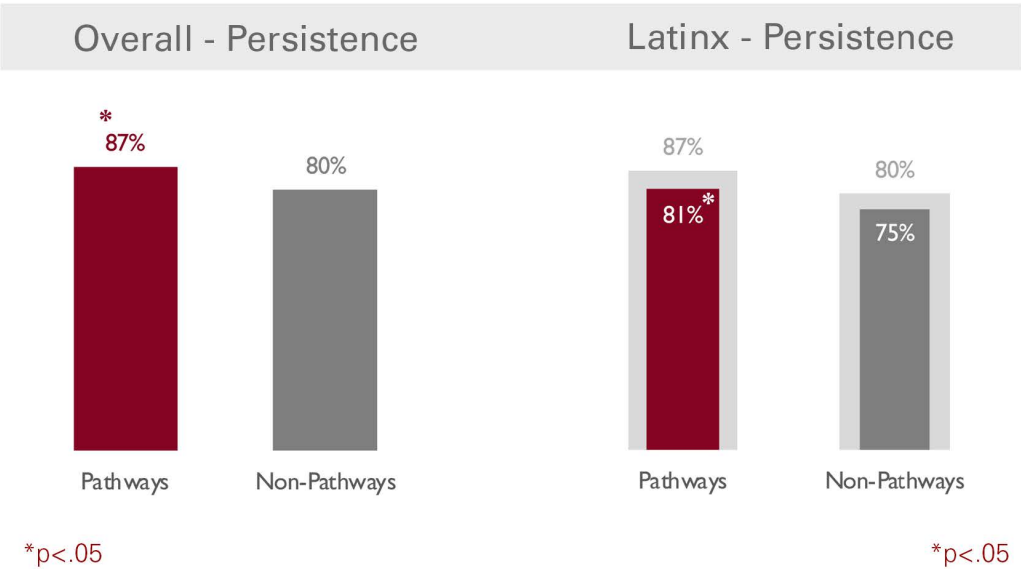
⁴ $t(922) = 3.571, p < .05$

PERSISTENCE

Persistence rates from year one to year two were assessed for Pathways and non-Pathways students and disaggregated for Latinx students. A higher percentage of Pathways students persisted from the first year to the second year compared to non-Pathways students, a difference that was statistically significant.⁵ Latinx students in Pathways persisted at a higher rate compared to Latinx students not in Pathways.⁶

PERSISTENCE is defined as continued enrollment for three consecutive primary terms. Any student who attempted credits during fall 2015, spring 2016, and fall 2016 semesters were identified as persisting from year one to year two.

The percentage of Pathways students who persisted from the first to second year was higher than non-Pathway students. In addition, more Latinx Pathways students persisted than their Latinx non-Pathways peers.



⁵ $\chi^2(1) = 15.835, p < .05$

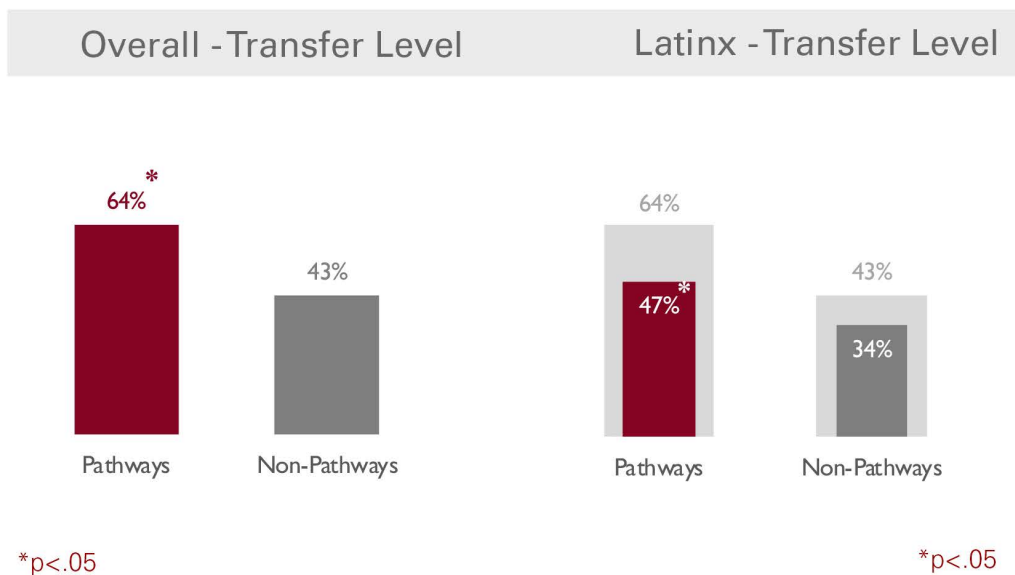
⁶ $\chi^2(1) = 4.829, p < .05$

TRANSFER-LEVEL MATH & ENGLISH

Completion of transfer-level math and English, crucial gateway courses, were assessed for Pathways and non-Pathways students at the end of their third year. At the end of three years, approximately 64% of Pathways students had successfully completed transfer-level math and English, compared to 43% of non-Pathways students, a difference that was statistically significant.⁷ Approximately 47% of Latinx students in Pathways successfully completed transfer-level math and English compared to 34% of Latinx students not in Pathways, a difference that was statistically significant.⁸

TRANSFER-LEVEL courses are any math or English courses transferable to the UC, CSU system, or both.

At the end of three years, a higher percentage of Pathways students successfully completed transfer-level math and English than non-Pathways students. The same holds true for Latinx Pathways students.



⁷ $\chi^2(1) = 81.79, p < .05$

⁸ $\chi^2(1) = 5.625, p < .05$

Overall

TRANSFER STATUS

The California Community Colleges Chancellor's Office (CCCCO) Data Mart system tracks three transfer statuses: **transfer-directed, transfer-prepared, and transfer-ready**. Transfer-prepared and transfer-ready status were assessed in this study. Proportional differences were assessed for Pathways and non-Pathways students, as well as disaggregated for Latinx students on transfer-prepared and transfer-ready status at the end of three years.

Transfer-Prepared

At the end of three years, 48% of Pathways students achieved transfer-prepared status compared to 32% of students, a difference of 16 percentage points. Results were statistically significant.⁹ Approximately 31% of Latinx students in Pathways achieved transfer-prepared status compared to 22% of Latinx students not in Pathways, a difference of 9% points. Statistically significant¹⁰ differences were also found for Latinx students.

TRANSFER-DIRECTED is defined as successful completion of a transfer-level math course and a transfer-level English course.

TRANSFER-PREPARED is defined as earning 60 or more transferable units, with a GPA of 2.0 or better.

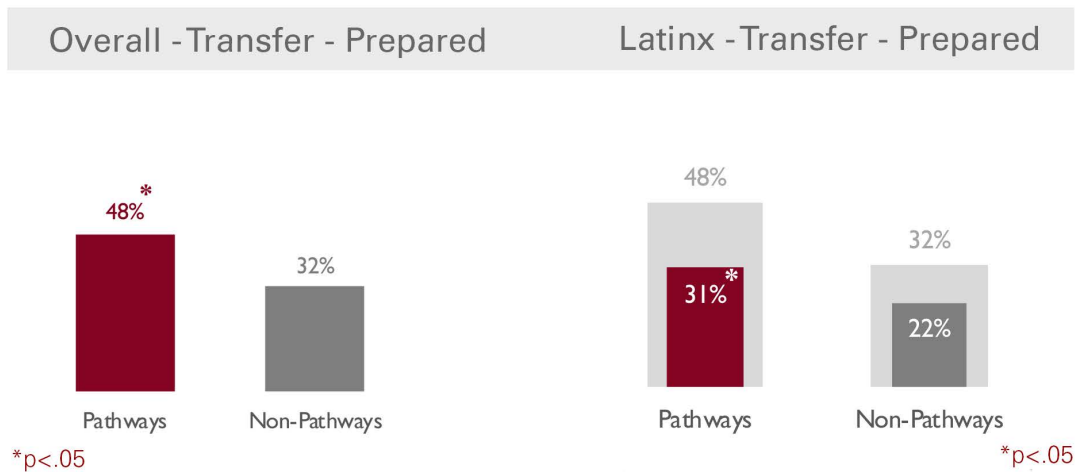
TRANSFER-READY is defined as successful completion of a transfer-level math course and a transfer-level English course and earning 60 or more transferable units with a GPA of 2.0 or better. Transfer-readiness differs from transfer-preparedness as it does not have the added requirement of completion of transfer level math and English.

Note: Transfer status does not include actual transfer to a four-year institution. See section on Completion.

The percentage of Pathways students, and specifically Latinx students, who were transfer-prepared was greater than non-Pathways at the end of three years.

⁹ $\chi^2(1) = 43.163, p < .05$

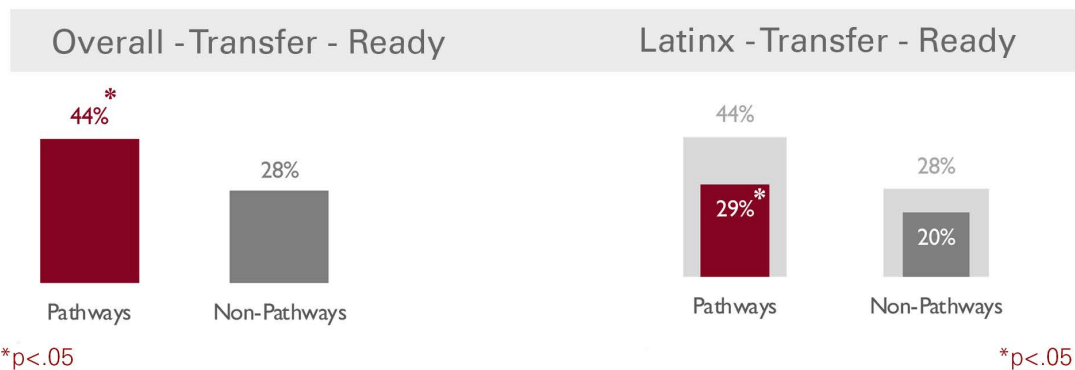
¹⁰ $\chi^2(1) = 10.412, p < .05$



Transfer-Ready

Pathways students fared better than non-Pathways students in this category. Approximately 44% of Pathways students achieved transfer-ready status compared to 28% of non-Pathways students, a difference that was statistically significant.¹¹ Similarly, Latinx students in Pathways achieved transfer-ready status at a higher rate compared to Latinx students not in Pathways by the end of three years (29% and 20% respectively). The 9%-point difference was statistically significant.¹²

Similarly, more Pathways students were transfer-ready than non-Pathways at the end of three years. A higher percentage of Latinx Pathways students were transfer-ready compared to Latinx non-Pathways students.



¹¹ $\chi^2(1) = 51.95, p < .05$

¹² $\chi^2(1) = 10.412, p < .05$

Overall

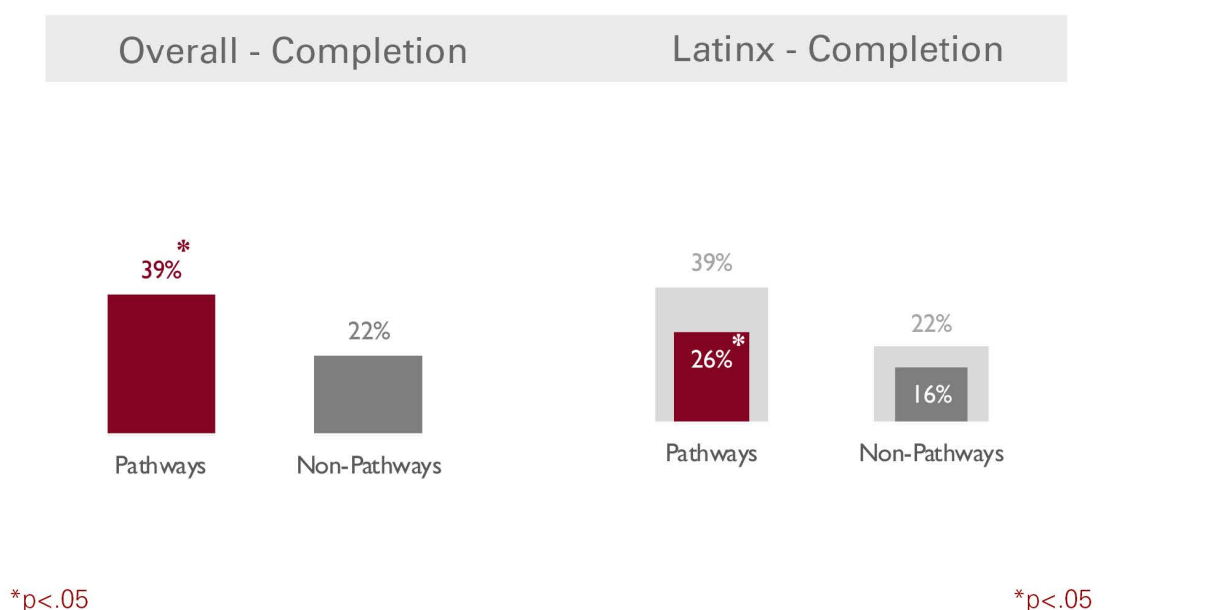
COMPLETION

At the end of three years, 39% of Pathways students received an AA/AS degree or transferred to a four-year institution, or achieved both, compared to 22% of non-Pathways students. The difference was statistically significant.¹³

Twenty-six percent of Latinx students in Pathways received an AA/AS degree or transferred to a four-year institution, or achieved both, compared to 16% of Latinx students not in Pathways. This difference was statistically significant.¹⁴

COMPLETION was defined as a student who received an AA/AS or transferred to a four-year institution at the end of their third year.

At the end of three years, completion rates for Pathways, and specifically Latinx Pathways students were greater than non-Pathways students.



¹³ $\chi^2(1) = 60.261, p < .05$

¹⁴ $\chi^2(1) = 13.370, p < .05$

PATHWAYS IMPACT

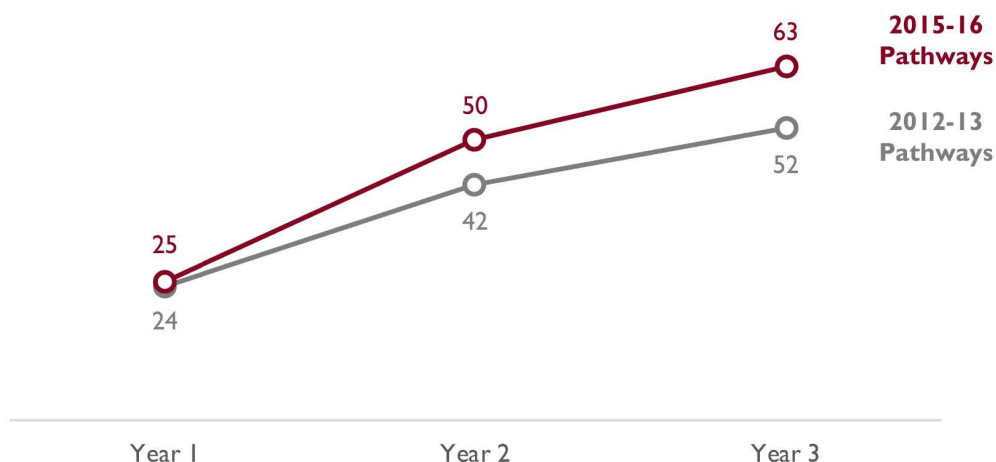
The analyses in this report clearly show that participation in the PCC Pathways program significantly increases the likelihood for success of students compared to not being enrolled in Pathways. In addition, Latinx students are greatly impacted and are more likely to accumulate credits (and transferable credits), persist from fall-to-fall, be transfer-ready, and complete compared to their Latinx non-Pathways peers.

The impact of Pathways is clearly showing positive impact for Latinx students, who are 51% of the PCC students population. However, an equity gap persists within the Pathways program. In order to address the needs of Pathways students as they move through college, Pathways now serves students in their second and third years of college. By supporting students over time, participation in the PCC Pathways program significantly increases Latinx students' likelihood of attaining transfer-ready status within three years.

PATHWAYS OVER TIME

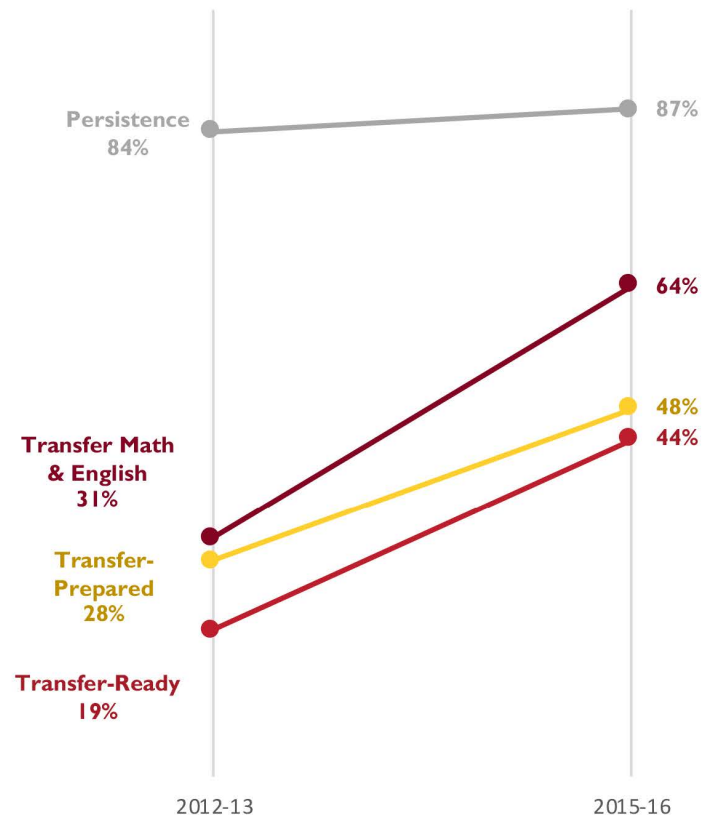
The PCC Pathways program is one that continues to evolve and adapt based on the needs of their students. Over time, program modifications have been made to increase the rates of success for first-year, full-time students in the program. A simple comparison of Pathways students from the 2012-2013 cohort to those in the sample of 2015-2016 cohort for this study are provided below. In three years,¹⁵ Pathways has shown increases for their students in all five success indicators.

On average, the cumulative credits earned by Pathways students has increased in the three years since the cohort analysis of 2012-2013 students.



¹⁵ The 2012-2013 cohort analysis included full-time and part-time Pathways students, whereas the 2015-2016 cohort analysis included only full-time Pathways students.

The percentage of Pathways students who completed transfer math or English or were transfer-ready has doubled since 2012-13. Almost 50% in 2015-16 were transfer-prepared.



RECOMMENDATIONS

FOR THE COLLEGE

1. Offer Pathways resources and services to new, first-year students not enrolled in PCC Pathways
2. Guarantee enrollment in math and English for all new first-year students and provide support (i.e., tutoring, study groups, coaching) to increase their chances of success in these classes
3. Strongly encourage students to enroll full time (a minimum of 12 units) each semester
4. Encourage the completion of FAFSA or Dream Act and offer other forms of financial support to increase the number of students able to attend school full time
5. Provide mandatory advisement to ensure that students follow their program maps and education plans and select courses that further their academic goal(s)

FOR FUTURE STUDIES

1. **College 1:** This study and a previous Pathways study of the 2012-2013 cohort identified an equity gap in College 1. Specifically, Latinx and African American Pathways students succeed at lower rates than their White and Asian American counterparts. Pathways staff and UCLA evaluators engaged in a year-long inquiry process that has led to revision of College 1 curriculum and the professional development program for course instructors. The impact of the changes will be monitored during the 2019-20 academic year.
2. **Career and Major Selection:** Pathways staff and UCLA evaluators are also engaged in an inquiry process to better understand how students make career and major choices, their obstacles to goal completion, and ways to support students in and out of the classroom. The process has led to revision of career-related activities in Jam and College 1. The impact of the changes will be observed during the 2019-20 academic year.
3. **African American Pathways Student Success:** African American students at PCC have unacceptably low rates of success, persistence, and completion. It is recommended that a study of African American students in Pathways be conducted in 2019-20 using the five success indicators described in this study.
4. **Non-Pathways First Year Students:** Beginning in fall 2019, Pathways staff will offer selected Pathways resources and services to non-Pathways first-year students. It is recommended that the College measure the impact they have on the five success indicators described in this study.
5. **Second Year Students:** Pathways staff and UCLA researchers continue to conduct qualitative research to understand the various types of second year Pathways students and their evolving needs as they persist.
6. **Cost Effectiveness:** College researchers conducted that study of PCC Pathways in 2017 and found the program is cost effective. It is highly recommended the college complete a new study to assess if PCC Pathways continues to be cost effective and to assess whether program costs remain stable over time as the number of students served increases.

METHODS

This study focused on a sample of first-time, first-year Pathways and non-Pathways students in the 2015-2016 cohort at PCC. For the 2015-16 cohorts of first-time, first-year students, we identified 1,552 students in the Pathways group and 2,297 in the comparison group were identified. To make the groups more similar for comparative analyses, only students who met the following criteria for both the Pathways and comparison groups were included:

- Were first-time students at PCC in fall 2015
- Were 18 years of age or had graduated high school in 2015
- Attempted full-time units their first year
- Had not earned any units prior to fall 2015

The final sample sizes for the Pathways and comparison groups for this study were reduced to 1,136 for Pathways and 761 for the comparison group. Comparisons between these two groups, with an additional focus on Latinx students, were conducted utilizing SPSS to examine differences on five key student success indicators: cumulative credits earned, persistence, transfer-level math and English completion, transfer status, and completion.

PCC PATHWAYS PROGRAM

PCC Pathways was launched in 2011 to increase the success, persistence, and completion rates of students at PCC. The program uses a prescriptive “guided pathway” approach which is complemented by a comprehensive set of support services and high impact practices as identified by the Association of American Colleges and Universities (Kuh, 2008). These include an extended orientation to college, a comprehensive set of support services, a first-year seminar, and resources and support specific to transfer.

There are four Pathways: XL, a general pathway, open to all students; International Student Pathway, for international students; Athletes Pathway, for students enrolled in PCC’s athletic programs; and Ujima, which focuses on African American themes and issues.

The program currently serves students in their first, second, and third years at PCC. Students who continue in the program after their first year must complete online activities and participate in career exploration and transfer events to maintain priority registration and access to Pathways’ resources and services in subsequent years.

PATHWAYS STATUS is defined as first-year students who...

- Attend a college orientation (Jam)
- Attempt a minimum of 12 units (full-time status) in the fall and spring semesters of year 1
- Enroll in math/statistics, English/ESL, and a first-year seminar (College 1) in their first semester
- Meet regularly with their success coach
- Participate in various workshops and activities
- Complete a Comprehensive Student Ed Plan (CSEP) by the end of year 1
- Maintain a GPA of 2.0 or better

Students who meet all program requirements receive priority registration and access to a dedicated resource center.

ⁱ Kuh, G.D. (2008). High-impact educational practices: what they are, who has access to them, and why they matter. Excerpts retrieved from <https://www.aacu.org/leap/hips>