

# Asian/Pacific Islander Persistence and Graduation Gaps

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The purpose of this report is to explore student success differences between Asian/Pacific Islander first-time, full-time (FTFT) undergraduates and FTFT undergraduates not of color. This report may help better serve students by understanding the timing and majors (by college) where gaps for Asian/Pacific Islander students are largest.

## Executive Summary

Although the gap in freshman retention between all Asian/Pacific Islander students and students not of color is negligible, we observe a moderate-sized third fall persistence gap and a larger six year graduation gap. Analysis of Asian only, Hawaiian/Pacific Islander only, and Multi-Racial students reveals that persistence gaps have shrunk considerably for Asian only cohorts and Asian Multi-Racial cohorts since FA10, while persistence gaps for Hawaiian/Pacific Islander only students have remained large for both older and newer cohorts.

Highlights of this report's findings are as follows:

- Overall, gaps in persistence and graduation between Asian/Pacific Islander students and students not of color increase as time at CSU increases. For instance, freshman retention gaps are smaller than gaps at third fall and graduation. This trend is observed across all studied ethnicity groups.
- Gaps in third fall persistence are smaller for more recent cohorts, which indicates that the persistence and graduation of Asian/Pacific Islander students relative to students not of color is improving.
- Asian/Pacific Islander students with a cohort major in Natural Sciences, Liberal Arts, or Warner College of Natural resources persist at greater rates than students not of color in their college.
- Asian/Pacific Islander students with a cohort major in Agricultural Sciences, Business, Engineering, Health and Human Sciences, Veterinary Medicine & Biomedical Sciences, or Intra-University show consistent persistence gaps compared to students not of color in their college.

## Population and Student Success Outcomes

A student's ethnicity is identified by their undergraduate application materials. Except where indicated, the student counts by ethnicity used in this report are "duplicated" because multi-racial students are included in all applicable groups. For example, students that indicate they are Asian as well as Hispanic/Latino are included in both groups. About 45% of Asian/Pacific Islander undergraduates report membership in more than one ethnicity. The comparison group (students not of color) includes international students, white students, and students who did not identify their ethnicity. This comparison group matches the federal and state definition for non-minority students (i.e. students not of color) and is consistently applied in all IRP&E gap analyses.

Freshman retention is measured at the start of the second fall, third fall persistence is measured at the third fall, and graduation gaps are measured at the end of six full academic years. The most recent five applicable cohorts are used for each of these outcomes. For instance, second fall persistence includes FTFT students from FA10-FA14 cohorts and six year graduation includes FTFT students from FA05-FA09 cohorts. The gaps in persistence and graduation are calculated by subtracting the Asian/Pacific Islander rates from the rate for students not of color. These gaps are discussed in terms of the percentage point (PP) difference. A larger magnitude in the PP difference indicates that the Asian/Pacific Islander rate differs greatly from the comparison group and a small magnitude in the PP difference indicates that the Asian/Pacific Islander rate is similar to the comparison group. It is an institutional goal for all ethnicity groups to display no gaps in six year graduation rates.

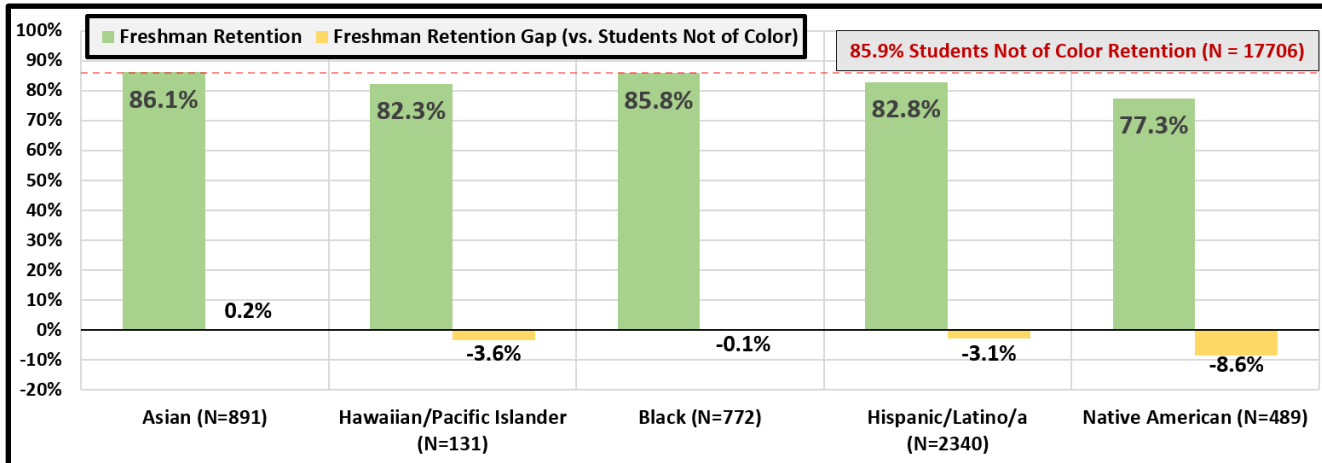
## PP Differences in Persistence and Graduation

This section explores gaps in student success (measured by PP difference) for students of color versus students not of color. This analysis does not account for any other demographic or academic differences between groups.

### Freshman Retention (Second Fall Persistence)

Figure 2 displays freshman retention rates among FTFT students in the FA09-FA13 cohorts, by duplicated ethnicity group. The green bars show retention by ethnicity group and the red line shows the comparison group rate. The yellow bars display the gaps between each group’s observed second fall persistence and the rate for students not of color.

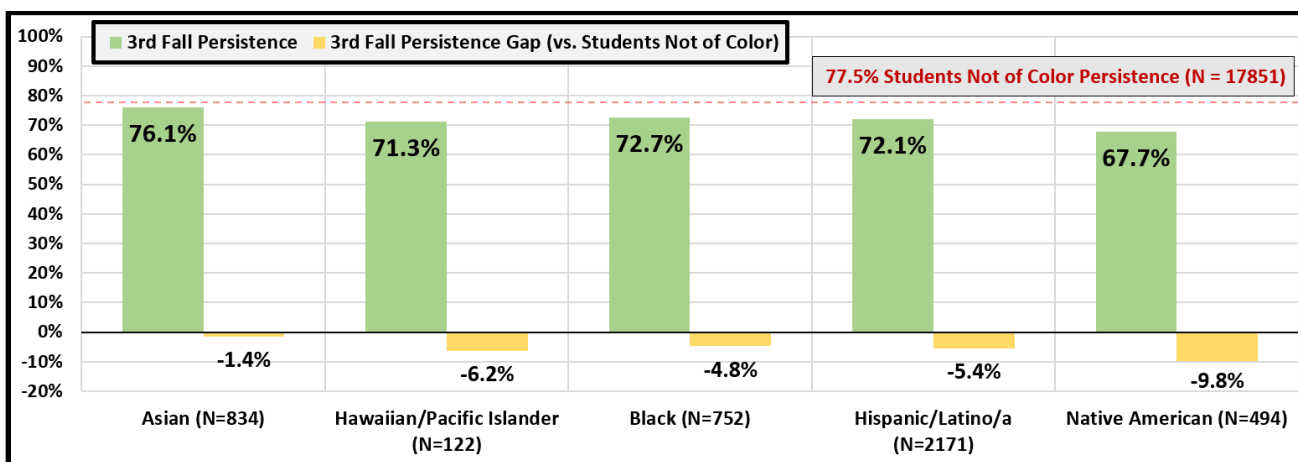
**Figure 1. Freshman Retention by Duplicated Ethnicity, FA10-FA14 Freshman Cohorts**



When assessing FTFT freshman retention (persistence to the second fall), we observe that Asian students in recent FA10-FA14 cohorts have a retention rate that is +0.2 PP greater than students not of color, 86.1% to 85.9%. For Hawaiian/Pacific Islander students, a moderate freshman retention gaps exists (-3.6 PP). This gap is similar to the retention gap observed for Hispanic/Latino/a students and substantially larger than the negligible gap observed for Black students.

Figure 2 shows a similar chart displaying FTFT persistence to the third fall.

**Figure 2. 3rd Fall Persistence by Duplicated Ethnicity, FA09-FA13 Freshman Cohorts**



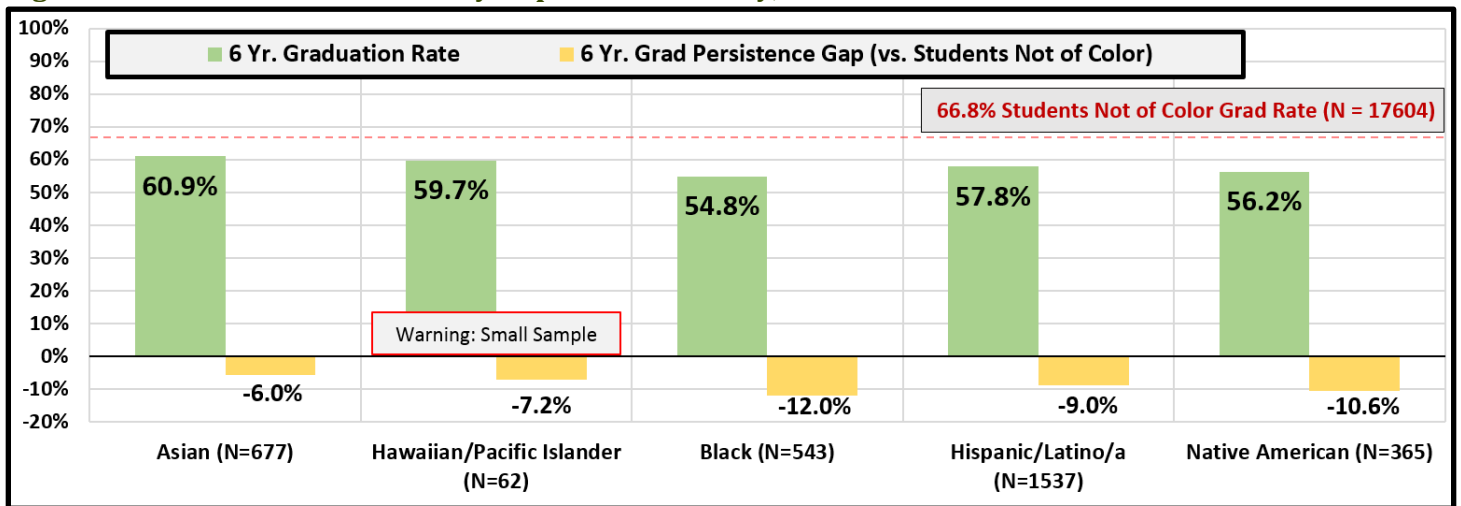
Asian students in the studied cohorts persist to the third fall at a rate of 76.1%, a -1.4 PP gap compared to the student not of color rate of 77.5%. Comparing third fall persistence gaps to the freshman retention gaps shown in Figure 1, we

observe increases in gap size for each ethnicity group compared with students not of color. For Asian students, there is no gap at freshman retention but a gap of -1.4 PP in third fall; this represents the smallest gap increase among the four displayed ethnicity group. Hawaiian/Pacific Islander freshmen display a third fall persistence gap (-6.2 PP) that is 2.6 PP larger than the freshman retention gap of -3.6 PP. These discrepancies suggest that environmental and structural factors that affect Asian and Hawaiian/Pacific Islander student persistence compared to students not of color have a larger impact in the second year of CSU attendance than the first year.

### 6 Year Graduation Rates

Figure 4 mirrors Figures 2 and 3, but displays the six year graduation outcome.

**Figure 3. 6 Year Graduation Rate by Duplicated Ethnicity, FA05-FA09 Freshman Cohorts**

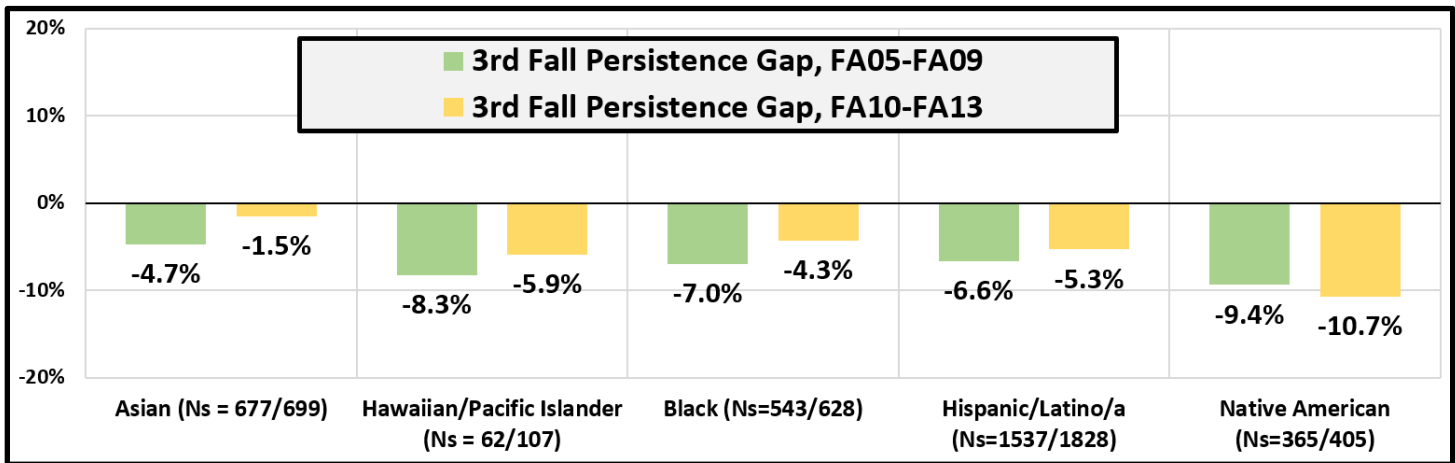


We observe that FA05-FA09 Asian students graduate within six years at a rate of 60.9%, a -6.0 PP graduation gap compared to the student not of color graduation rate of 66.8%. Hawaiian/Pacific Islander sample size is very small for the FA05-FA09 cohorts, and thus findings for this group should be interpreted with caution; these students show a slightly larger graduation gap (-7.2 PP) than Asian students but a smaller gap than other studied ethnicity groups. Across all studied ethnicity groups, we observe that achievement gaps increase compared to the third fall persistence gaps shown in Figure 3. This finding indicates that factors negatively affecting Asian and Hawaiian/Pacific Islander student persistence relative to students not of color continue to play an ongoing role in student success after the third fall semester.

It is possible that the graduation gaps are larger than the persistence gaps because more recent cohorts are more likely to persist compared to prior cohorts.

To assess this hypothesis, Figure 4 shows third fall persistence gaps for older cohorts (FA05-FA09) versus newer (FA10-FA13) cohorts. The difference in third fall persistence between Asian students, Hawaiian/Pacific Islander students and students not of color for older cohorts (FA05-FA09) is displayed by the green bars and the difference for newer cohorts (FA10-FA13) is displayed by the yellow bars.

**Figure 4. 3rd Fall Persistence Gap vs Students Not of Color, FA05-FA09 vs. FA10-FA13**



We observe that third fall persistence gaps have closed greatly for Asian students, with a gap size of -1.5 PP in recent cohorts versus -4.7 PP for the FA05-FA09 graduation study cohorts. Gap size has also decreased among post-FA10 Hawaiian/Pacific Islander cohorts (-5.9 PP versus -8.3 PP). This trend of decreased persistence gaps is also observed for Black students and for Hispanic/Latino/a students to a lesser extent. Given that this third fall persistence gap difference is substantial and third fall persistence is strongly associated with six year graduation, we should expect that more recent Asian and Hawaiian/Pacific Islander cohorts will graduate with a noticeably smaller graduation gap than the gaps observed for the FA05-FA09 cohorts.

**PP Differences in Student Success: Asian only, Pacific Islander only, Multi-Racial**

This section of the report replicates the duplicated student data used above, but with Asian/Pacific Islander students subdivided into four ethnicity subgroups: Asian only, Hawaiian/Pacific Islander only, Asian Multi-Racial, and Hawaiian/Pacific Islander Multi-Racial. Throughout this section, students classified as Asian only and Hawaiian/Pacific Islander only match federal definitions for those ethnicity groups. Multi-Racial students include all students who self-classify as Asian or Hawaiian/Pacific Islander plus one or more additional ethnicities; this group includes students who are federally categorized as Multi-Racial students, plus part-Hispanic/Latino students who are federally classified as Hispanic/Latino students. The same three outcome measures used in the previous section are explored, and recent cohort performance is contrasted with historical cohort performance to identify changes in student success over time.

**Figure 5. Freshman Retention by Ethnicity Subgroup, FA10-FA14 Asian/Pacific Islander Student Cohorts**

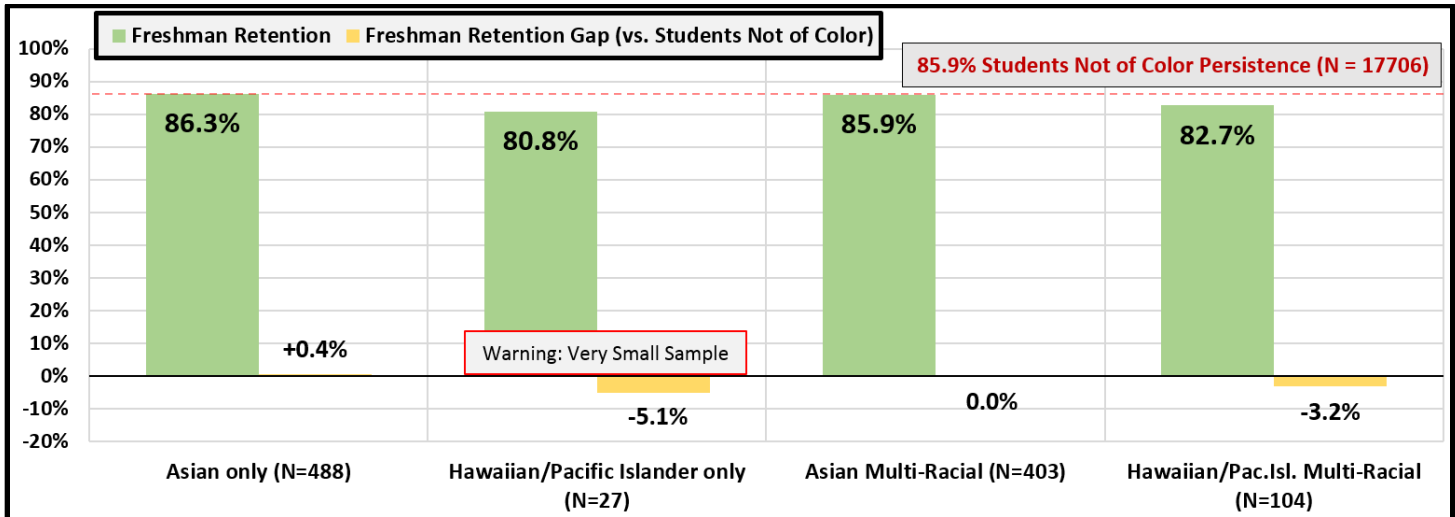
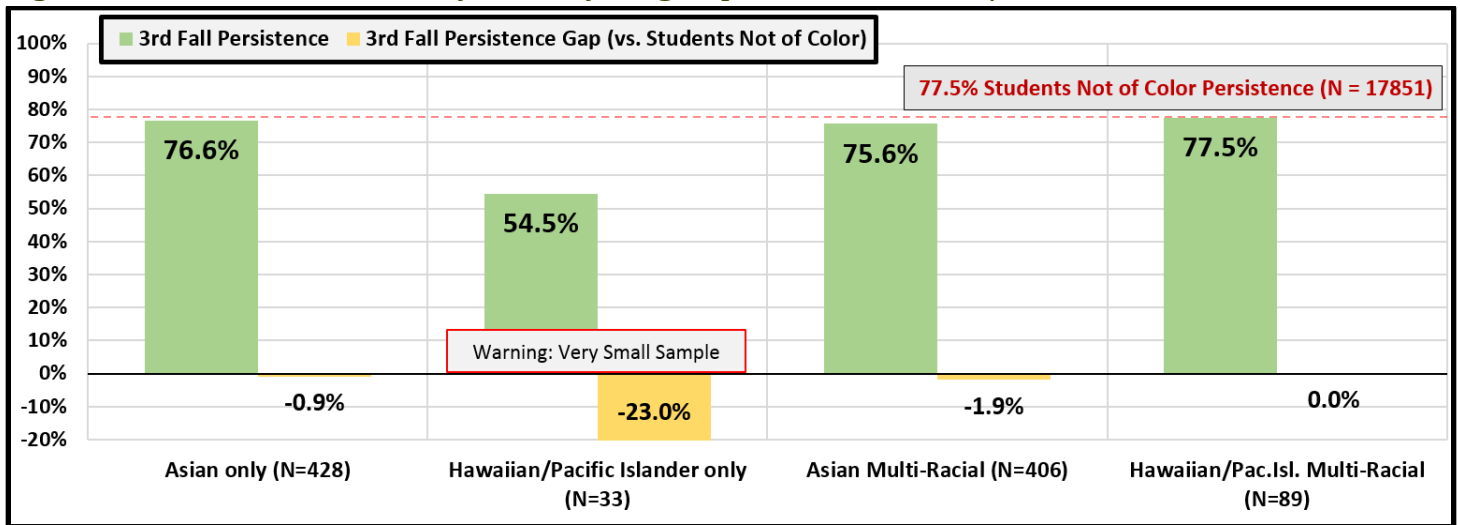


Figure 5 shows that the duplicated Asian freshman retention advantage seen in Figure 1 (+0.2 PP) decomposes into near-average performance compared to students not of color for both Asian only and Asian Multi-Racial students. For Hawaiian/Pacific Islander Multi-Racial students, we observe a freshman retention gap of -3.2 PP. Freshman retention for Hawaiian/Pacific Islander only students is -5.1 PP below the freshmen not of color mean; while this represents a noticeable drop, the sample size for this group is very small (N=27 for the FA10-FA14 cohorts) and thus cohort-by-cohort volatile should be expected and observed results should be interpreted with extreme caution.

Figure 6 separately displays third fall persistence and third fall persistence gaps for Asian only, Hawaiian/Pacific Islander only, Asian Multi-Racial, and Hawaiian/Pacific Islander Multi-Racial students.

**Figure 6. Third Fall Persistence by Ethnicity Subgroup, FA09-FA13 Asian /Pacific Islander Student Cohorts**

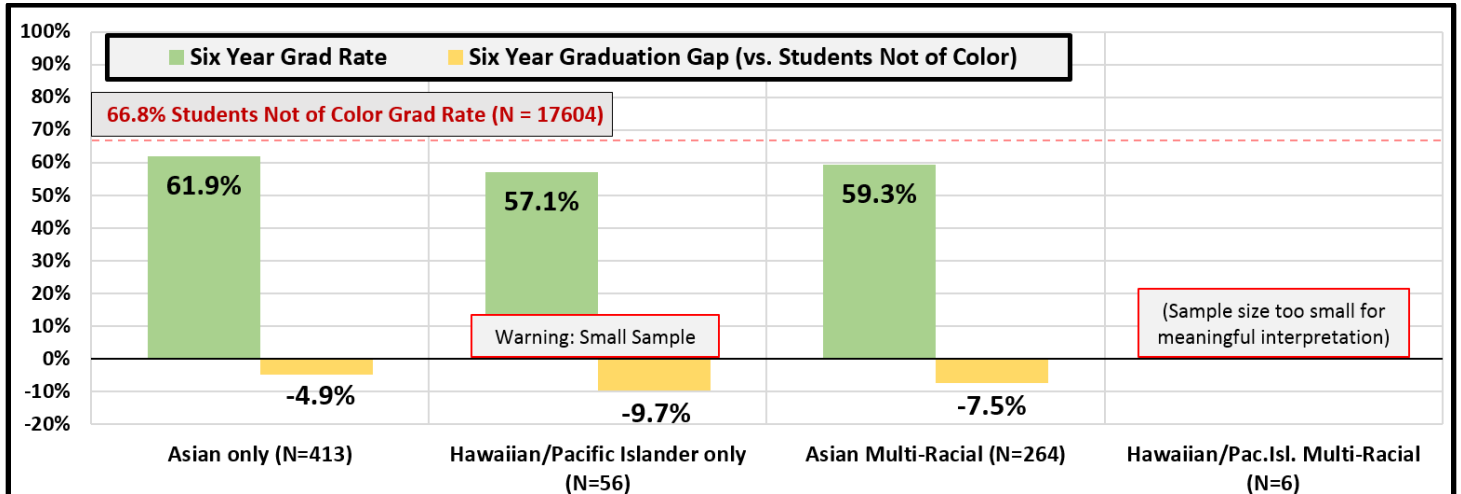


At third fall we observe that Asian only persistence is lesser than students not of color by -0.9 PP, whereas second fall persistence is slightly greater for Asian only versus students not of color (+0.4 PP). Similarly, the third fall persistence gap for Asian Multi-Racial students has increased by over 1.0 PP compared to second fall (-1.9 PP versus -0.5 PP). Sample size and third fall persistence rates for Hawaiian/Pacific Islander-only students are both very low, with this handful of students experiencing a gap of -23.0 PP versus students not of color. However, the magnitude of this finding is likely volatile due to the very small sample of 33 students; the direction of the finding, indicating that Hawaiian/Pacific Islander students experience a third fall persistence gap of some size, is the relevant aspect of this data point. At third fall, there is no evidence of a persistence gap for Hawaiian/Pacific Islander Multi-Racial students, although sample size is again rather small (N=89) and thus some variation across cohort ranges should be expected.

Overall, we observe that the negligible gaps in freshman retention begin to widen for Asian only, Hawaiian/Pacific Islander only and Asian Multi-Racial students when we measure persistence at third fall. The results suggest that these students experience more substantial barriers to persistence (relative to students not of color) in their second academic year than in their first year of enrollment.

Figure 7 displays similarly broken-out data measuring six year graduation rates and achievement gaps among the FA05-FA09 Asian/Pacific Islander freshman cohorts.

**Figure 7. Six Year Grad Rate by Ethnicity Subgroup, FA05-FA09 Asian/Pacific Islander Student Cohorts**

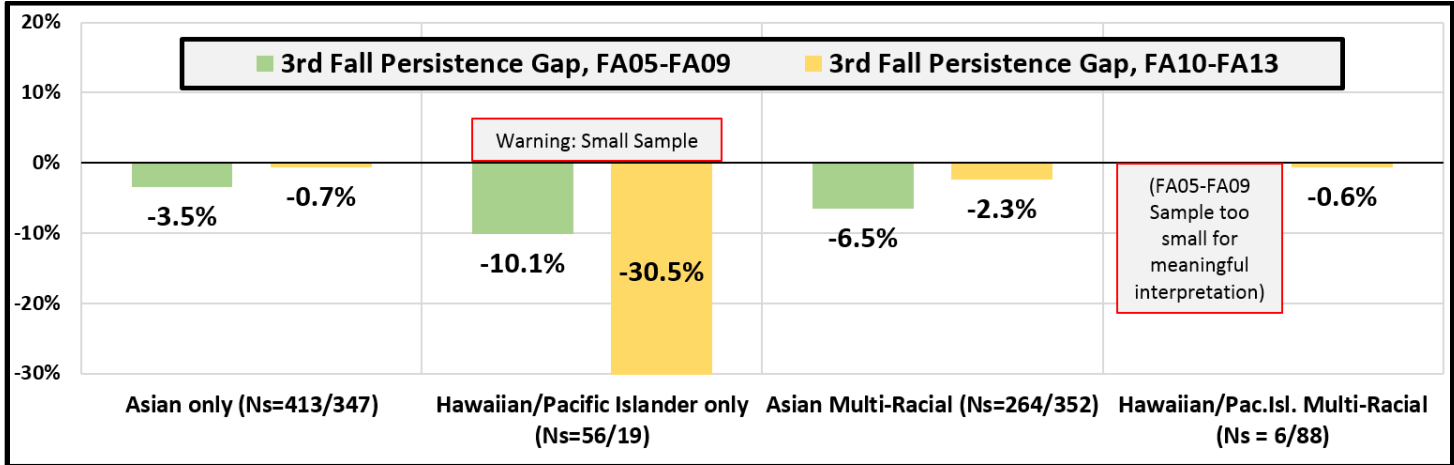


Despite the small persistence gaps displayed for Asian only and Multi-Racial students in Figures 5 and 6, six year graduation gaps are much larger for Asian only (-4.9 PP) and Asian Multi-Racial students (-7.5 PP). The six year graduation gap for Hawaiian/Pacific Islander-only freshmen, while large (-9.7 PP), is substantially smaller than the corresponding third fall persistence gap displayed in Figure 5; as previously mentioned, substantial cross-cohort variance is not surprising among this population given the small number of observations per cohort. The sample size of Hawaiian/Pacific Islander Multi-Racial students across this cohort frame is too small (N=6) for any meaningful interpretation.

The large graduation gaps shown in Figure 7 may be surprising given the small persistence gaps observed for the Asian-only and Multi-Racial groups. One important consideration is that the graduation data depicted in Figure 7 covers earlier cohorts than the persistence data in Figures 5 and 6. It is possible that changes in persistence between the Figure 7 cohort and more recent cohorts may explain a portion of the difference between Asian/Pacific Islander graduation gaps versus persistence gaps.

Figure 8 investigates whether there have been substantial changes in third fall persistence gaps between the FA05-FA09 graduation study cohort and more recent cohorts.

**Figure 8. Asian/Pac. Isl. 3<sup>rd</sup> Fall Persistence Gaps by Ethnicity Subgroup, FA05-FA09 vs FA10-FA13 Cohorts**



Comparing third fall persistence among students in the FA05-FA09 cohorts to the FA10-FA13 cohorts reveals that gaps have shrunk substantially for both Asian only and Asian Multi-Racial students in newer cohorts. Given the strong relationship between third fall persistence and six year graduation, we expect to observe that the Asian only and Asian Multi-Racial six-year graduation gaps will shrink for the FA10 and more recent cohorts compared to the gaps observed in Figure 7. The gap also appears to be small among FA10 and newer Hawaiian/Pacific Islander Multi-Racial students. Among Hawaiian/Pacific Islander-only freshmen, third fall persistence gaps have increased among recent cohorts. In addition to volatility caused by small size, some of this variability may be due to changes in self-identification patterns; only 19 students identified themselves as Hawaiian/Pacific Islander-only among the FA10-FA13 cohorts versus 56 students in the FA05-FA09 cohorts. Similarly, just 5 students in the FA05-FA09 cohorts self-identified as Hawaiian/Pacific Islander Multi-Racial, versus 88 students in the more recent cohort frame.

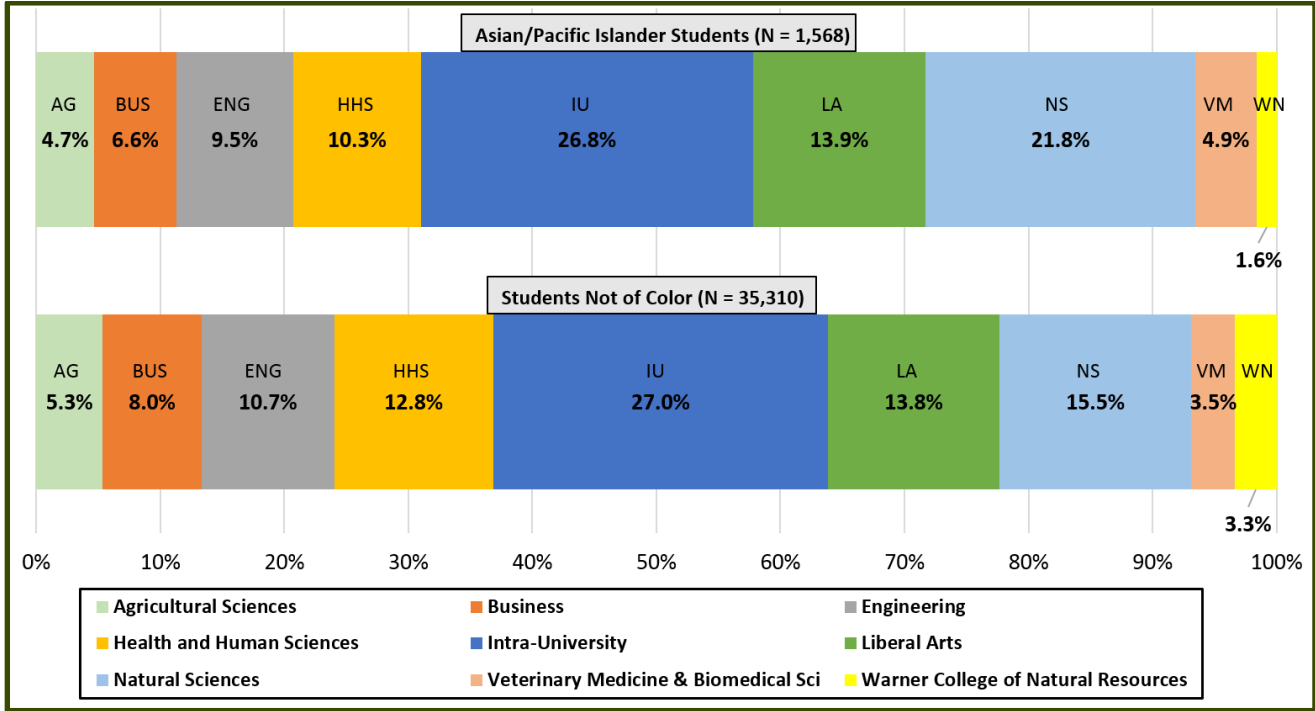
### Asian/Pacific Islander Enrollment and Success by College

This section focuses on the enrollment and success of Asian/Pacific Islander students by college. In this section any student who reports partial or full Asian or Hawaiian/Pacific Islander ethnicity is counted once as an Asian/Pacific Islander student. Breaking down this section of the report into Asian/Pacific Islander ethnicity subgroups is not feasible because the by-group student counts would be too small after partitioning students by both major college and ethnicity subgroup.

### Distribution of First Fall Majors, by College

Figure 9 displays the distribution of FTFT Asian/Pacific Islander students across all studied cohorts FA05-FA14. The distribution of majors among students not of color is included for comparison.

**Figure 9. % Cohort Major College, Asian/Pacific Islander Students & Students Not of Color FA05-FA14**

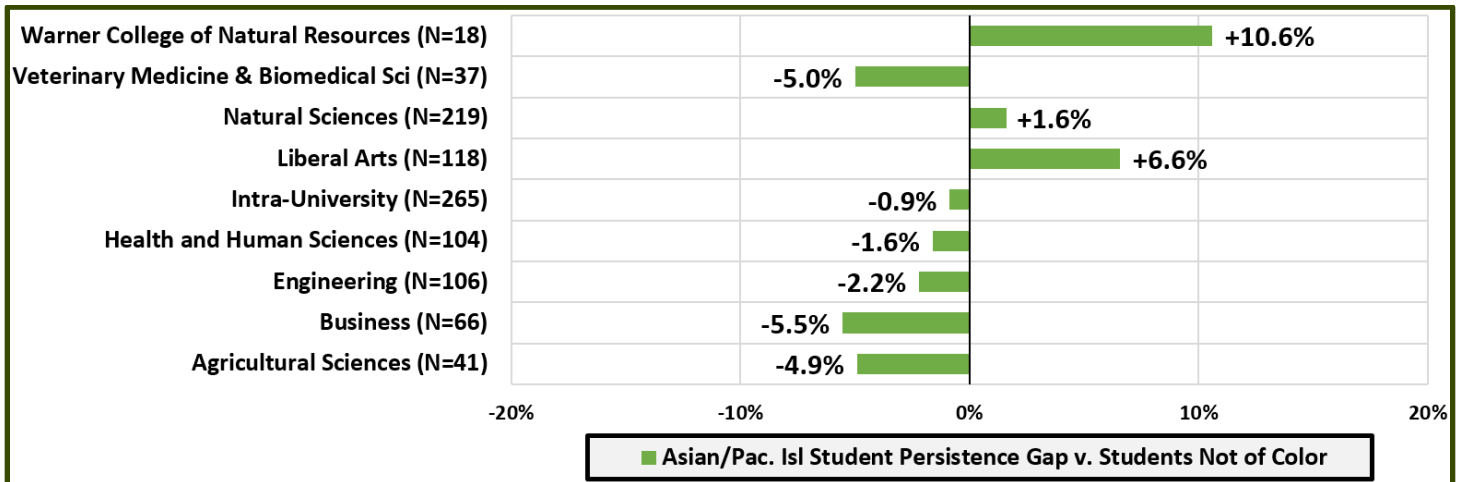


Among the FA05 through FA14 FTFT cohorts there are 1,568 freshmen who self-classify as partially or only Asian or Hawaiian/Pacific Islander, versus 35,310 freshmen students not of color. The distribution of Asian/Pacific Islander first fall majors is within a few PP of the students not of color distribution for most colleges, although there are a few notable differences in enrollment by-college. Asian/Pacific Islander students are substantially more likely to carry a Natural Sciences major than students not of color (21.8% vs. 15.5%), and are slightly more likely to carry a Veterinary Medicine and Biomedical Sciences major (4.9% versus 3.5%). Conversely, Asian/Pacific Islander enrollment rates are slightly lower than the student not of color rate for Health and Human Sciences (10.3% versus 12.8%), Warner College (1.6% versus 3.3%), Business (6.6% versus 8.0%), and Engineering (9.5% versus 10.7%).

**Percentage Point Differences in Asian/Pacific Islander Success, by College**

Figure 10 displays gaps in freshman retention for FA10-FA14 Asian/Pacific Islander students, by cohort major college.

**Figure 10. Asian/Pacific Islander Freshman Retention Gap, FA10-FA14 Cohorts**

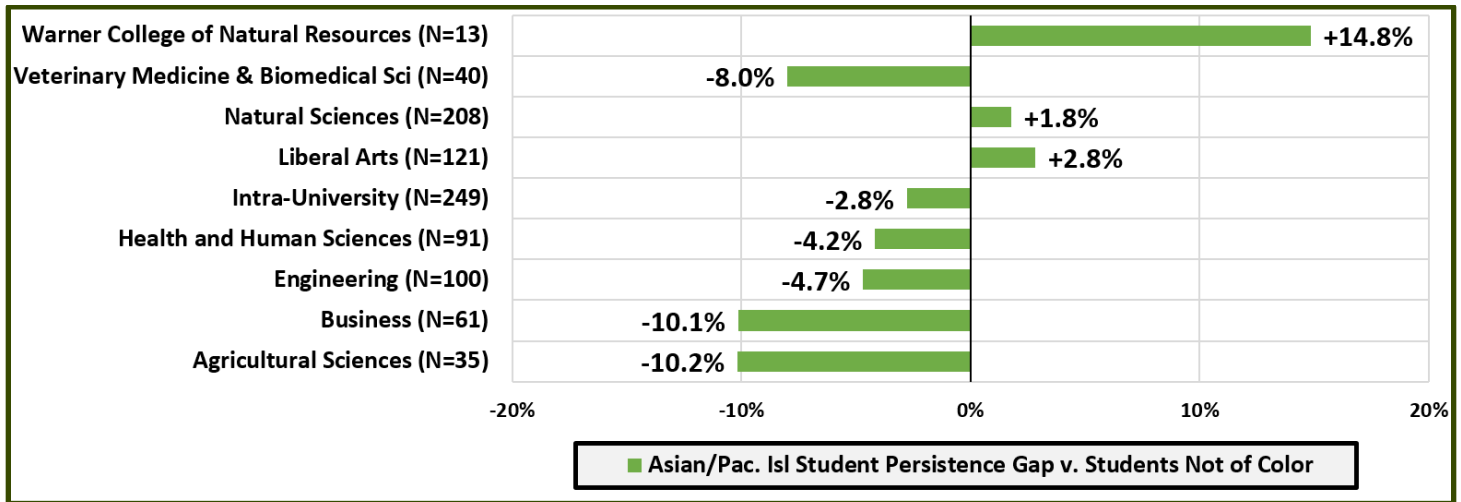




Among FA10-FA14 cohorts, Asian/Pacific Islander freshman retention is greater than students not of color among Warner College (+10.6 PP), Liberal Arts (+6.6 PP) and Natural Sciences (+1.6 PP) majors. Freshman retention gaps are present but small for Intra-University undeclared students (-0.9 PP), Health & Human Sciences majors (-1.6 PP), and Engineering majors (-2.2 PP). More substantial freshman retention gaps exist for Asian/Pacific Islander students with a cohort major in Agricultural Sciences (-4.9 PP), VMBS (-5.0 PP), and Business (-5.5 PP). Asian/Pacific Islander enrollment is relatively low among each of these three large-gap colleges, with each enrolling fewer than 70 Asian/Pacific Islander freshmen among the FA10-FA14 cohorts.

Figure 11 is a similar display showing Asian/Pacific Islander student third fall persistence gaps by College among the FA09-FA13 cohorts.

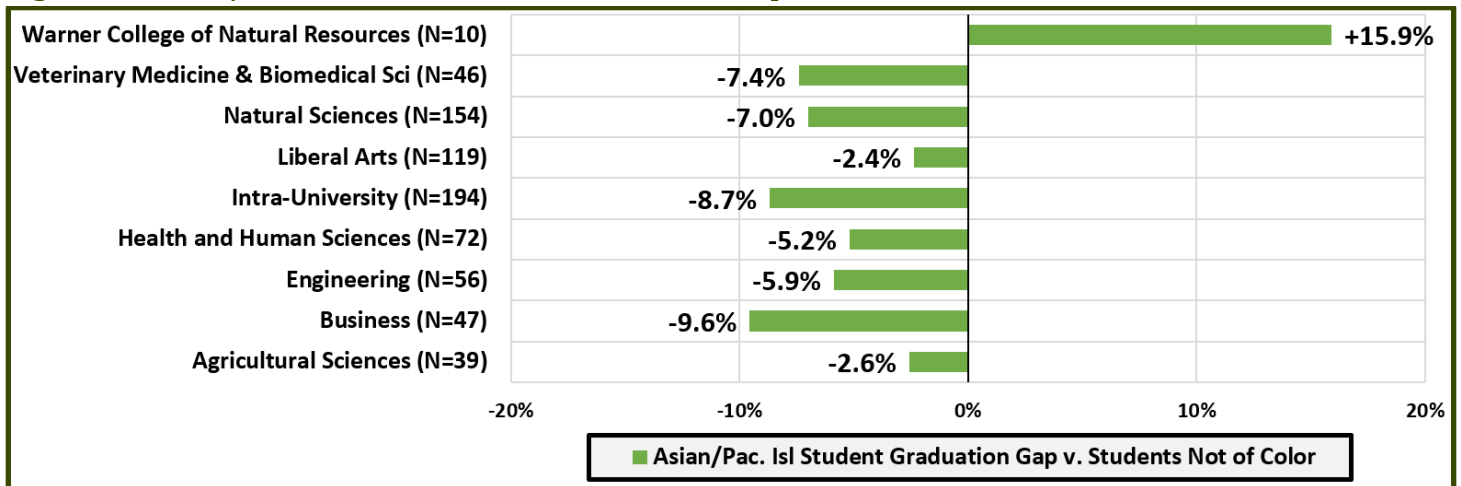
**Figure 11. Asian/Pacific Islander 3<sup>rd</sup> Fall Persistence Gap, FA09-FA13 Cohorts**



Third fall persistence gaps follow an identical by-college pattern as the freshman retention gaps observed in Figure 11. Asian/Pacific Islander students in Liberal Arts, Natural Sciences, and Warner persist at rates greater than students not of color. Students in the remaining colleges all show third fall persistence gaps, and the size of these gaps has increased over the corresponding freshman retention gap observed in Figure 10.

Figure 12 shows Asian/Pacific Islander six year graduation gaps compared to students not of color, by college.

**Figure 12. Asian/Pacific Islander Six Year Graduation Gap, FA05-FA09 Cohorts**



We observe the existence of six year graduation gaps for Asian/Pacific Islander students across all colleges except for Warner College (which includes only 10 students); Asian/Pacific Islander students in this college have outperformed students not of color on all three observed outcome measures. For all other colleges, six year graduation gaps exist but are within 10 PP of the student not of color mean for each college.

As previously discussed (see Figure 4), third fall persistence gaps have closed substantially for Asian/Pacific Islander students among cohorts FA10-FA13 versus FA05-FA09, with the gap for more recent cohorts at -2.2 PP compared to a gap of -5.1 PP overall among the older cohorts. Given the strong relationship between third fall persistence and six year graduation rates, we should expect that the graduation gaps observed in Figure 12 will also close substantially as we gain the capacity to measure six year graduation for newer cohorts.

## Conclusions

This report compares persistence and graduation of FTFT Asian and Hawaiian/Pacific Islander freshmen to persistence and graduation of FTFT freshmen students not of color. Overall we observe that Asian freshmen show no freshman retention gap, a small gap for third fall persistence, and a substantially larger gap for six year graduation rate. Hawaiian/Pacific Islander freshmen display a small freshman retention gap, a substantially larger third fall persistence gap, and a six year graduation gap that is slightly larger than the third fall persistence gap.

Separate analysis of Asian only, Hawaiian/Pacific Islander only, Asian Multi-Racial, and Hawaiian/Pacific Islander Multi-Racial subgroups reveals that third fall persistence gaps have closed almost entirely since FA10 for Asian-only students and have shrunk considerably for Asian Multi-Racial students. It appears that third fall persistence gaps are very low in recent cohorts for Hawaiian/Pacific Islander Multi-Racial students and have grown larger for Hawaiian/Pacific Islander-only students. However, sample sizes for these two ethnicity subgroups are small and thus it is very difficult to interpret the magnitude or consistency of findings. Hawaiian/Pacific Islander-only students display larger gaps than Asian only and Asian Multi-Racial students on all three outcome measures (freshman retention, third fall persistence, and six year graduation). It may be notable that the number of Hawaiian/Pacific Islander only students also appears to be shrinking in newer cohorts, and thus changes in performance for that group could be due to population changes or due to systematic changes in student self-identification patterns.

It should also be noted that more recent student of color cohorts are persisting at a higher net rate than older cohorts. In addition to gains observed among Asian/Pacific Islander freshmen, gaps in achievement compared to students not of color are also shrinking for Black and Hispanic/Latino/a students in more recent cohorts. This is a positive result for our efforts to increase the success of diverse students at CSU.

Freshman major college may be a strategic factor when designing interventions aimed at improving student success among Asian/Pacific Islander undergraduates. For example, among recent cohorts Asian/Pacific Islander freshmen with a major in Liberal Arts, Natural Sciences, or Warner College persist at rates that are greater than students not of color. Thus, Asian/Pacific Islander students in these colleges are less likely to be in need of success-related intervention or assistance. On the other hand, Asian/Pacific Islander students declare majors in Health and Human Sciences, Engineering, and Intra-University in relatively high numbers and also persist at rates that are lower than students not of color. Interventions that are targeted toward Asian/Pacific Islander students with a major in these higher-gap colleges will be more likely to eventually reduce overall persistence and graduation gaps.