

# The CAPacity Gazette



July 2020

## Dispatches from Community Colleges Transforming Remediation

Because students have the capacity to succeed in challenging courses and we have the capacity to support them



Math students at Victor Valley College

## Big Gains at Strong Implementers of AB 705

By Leslie Henson

At colleges offering few to no sections of remedial math and English in fall 2019, AB 705 reforms are producing large gains in the completion of transfer-level courses across all racial and ethnic groups, with the greatest gains among Black and Latinx students. Further, students starting in corequisite support courses are completing transfer-level courses at substantially higher rates than those who began in remedial prerequisite courses in the past.

The findings come from an analysis by the California Acceleration Project of data from a subset of colleges classified as [strong implementers](#) of AB705. Strong implementer colleges offered 90-100% of introductory sections at the transfer level and fewer than 10 percent of introductory sections as remedial courses in fall 2019. While formal statewide research won't be available until late in the fall, this analysis provides an early window into the impact of the law on student completion and equity.

Twelve strong implementers provided CAP with data on transfer-level completion for first-time English students. Across these colleges, 4,679 more students completed transfer-level composition in Fall 2019 than before the changes.

Ten colleges provided this data on first-time math students. Across these colleges, 5,298 more students completed transfer-level math -- 3,503 more in statistics/liberal arts math, 1,795 more in STEM math (Science, Technology, Engineering, and Math).

### Completion of Transfer-Level Courses

At all of the strong implementer colleges examined there were dramatic gains in completion of transfer-level courses among first-time English and math students.

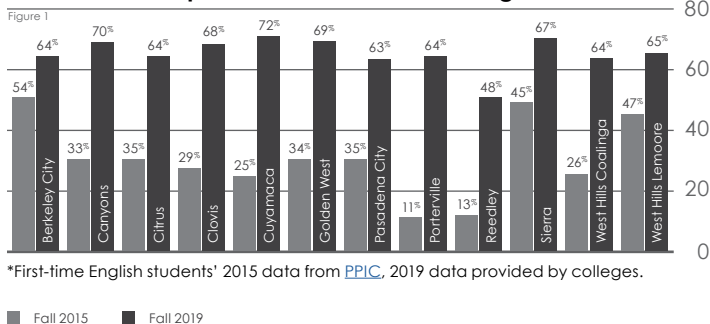
- In English, the average one-term completion rate has doubled, increasing from 32% to 65% across the 12 colleges examined. And at one college -- Porterville -- completion is almost six times higher (Figure 1).

# Big Gains at Strong Implementers of AB 705

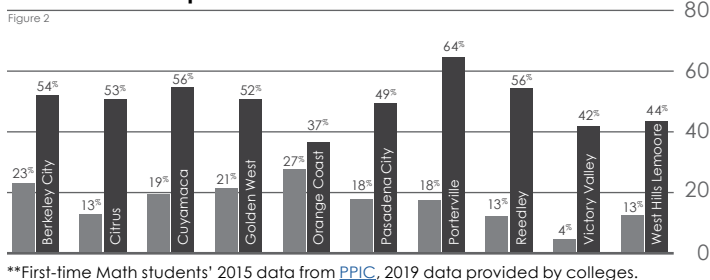
By Leslie Henson

- In math, one-term completion rose even more dramatically, increasing from 17% to 51% across the 10 colleges examined. Six colleges saw completion at least triple, and at one -- Victor Valley College -- completion of transfer-level math is ten times higher (Figure 2).

## One-Term Completion of Transfer-Level English



## One-Term Completion of Transfer-Level Math



Data from strong implementer colleges also shows the benefits of corequisite remediation -- models in which students enroll directly in transfer-level courses with additional instructional time -- as an alternative to traditional remedial prerequisite courses.

- At the nine colleges that shared corequisite data in English, corequisite students completed college composition at an average rate of 60% in fall, 25 percentage points higher than the one-year completion rate among students who started one remedial course below college composition in the past (35%).
- At the seven colleges providing data on corequisite remediation in math, students starting in corequisite courses completed transfer-level math at an average rate of 52% in fall, 33 percentage points higher than the one-year completion rate among students who started one remedial course below transfer in the past (19%).

## Course Success Rates

The above findings focus on a metric called "throughput" -- that is, the percentage of students who complete transfer-level courses in a given timeframe. It includes

all first-time English and math students, those who begin in transfer-level courses and those starting in remedial courses. This metric is the focus of AB 705.

The California Acceleration Project also examined a metric called "course success rates," or the percentage of students who enrolled in and passed a transfer-level class with a C or higher. This metric obscures the high rate of attrition among students who start in remedial courses, because if students never make it to a transfer-level course, they aren't counted. Nevertheless, now that virtually all students enrolled directly in the transfer level at the strong implementer colleges, many have wondered if course success rates would be lower than when access to these courses was highly restrictive.

Data from strong implementer colleges show a modest decline in average course success rates in both English and math overall. There was also substantial variability across colleges. A few colleges saw increases, some saw substantial declines, and at many, the changes were typical of the normal year-to-year variation.

- English:** Across the 12 colleges examined, the average success rate declined from 66% to 63% between fall 2015 and 2019. Two colleges had higher course success rates (three to 10 percentage points). One college stayed the same. Seven saw modest decreases (five points or less). Two saw more substantial decreases (nine points).
- Statistics/Liberal Arts math (SLAM):** Across the 10 colleges examined, the average success rate declined from 64% to 58% between 2015 and 2019. At three colleges, SLAM success rates increased (two to seven percentage points). Two colleges saw modest declines (one to four points). Five colleges saw larger declines (eight to 22 points).
- Business and STEM math (B-STEM):** Across the 10 colleges examined, the average B-STEM success rate declined by three percentage points, from 57% to 54%. At one college -- Porterville -- B-STEM course success increased by 17 percentage points. Two colleges saw course success increase by four points. Two colleges saw modest declines (one to three points), and five colleges more substantial declines (seven to 14 points).

Despite declines in average course success rates, because so many more students were able to actually enroll in transfer-level courses, there were dramatic gains in the number of students successfully completing English and math requirements: 4,679 additional students successfully completed transfer-level composition, 3,503 additional students completed transfer-level Statistics and Liberal Arts math courses, and an additional 1,795 students successfully completed introductory transfer-level B-STEM courses.

## Racial/Ethnic Equity Gains

The CAP analysis also included a preliminary look at racial/ethnic equity gains at the strong implementer colleges. All 12 strong implementer colleges in English provided disaggregated data, as did nine of the strong implementers in math (though one college was missing Black students' fall 2019 data in English and math). The analysis focused on outcomes for Black and Latinx students because these groups have historically been most disproportionately impacted across the state. Disaggregated fall 2015 data was provided by the Public Policy Institute of California.

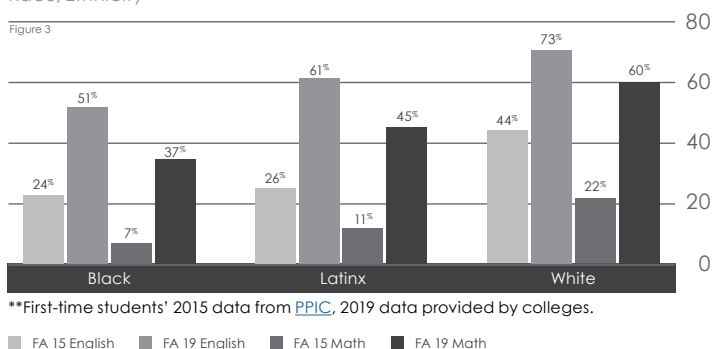
Across the colleges, all racial/ethnic groups had higher one-term completion of transfer-level English and math in Fall 2019. Substantial completion gaps remain between White, Black, and Latinx students, but Black and Latinx students saw larger relative gains than White students (Figure 3).

- In English, Black students' completion doubled, increasing from 24% to 51%. Latinx students' completion was 2.3 times higher, increasing from 26% to 61%. And White students' completion was 1.7 times higher, increasing from 44% to 73%.
- In math, Black students' completion was five times higher, increasing from 7% to 37%. Latinx students' completion was four times higher, increasing from 11% to 45%. White students' completion was 2.7 times higher, increasing from 22% to 60%.

### One-Term Completion of Transfer-Level Courses

Race/Ethnicity

Figure 3



The analysis also considered whether the gaps between groups narrowed. One way of examining equity gaps is to calculate the percentage point difference between groups. Under this method, achievement gaps between Black and White students grew in English (increasing from 20 to 22 points) and in math (increasing from 15 to 23 points). The gap between Latinx and White students declined in English (from 18 to 12 points) and grew in math (from 11 to 15 points).

A proportional method for examining equity gaps captures the greater relative gains that Black and Latinx students have made, revealing narrower equity gaps in both English and math.

- Black students' English completion rate had been 55% that of White students before the changes (24%/44%). After, Black students' completion was 70% that of White students (51%/73%).
- Black students' math completion rate had been 32% that of White students before the changes (7%/22%). After, Black students' completion was 62% that of White students (37%/60%).
- Latinx students' English completion rate had been 59% of White students' before the changes (26%/44%). After, Latinx students' completion was 84% that of White students (61%/73%).
- Latinx students' math completion rate had been 50% of White students' before the change (11%/22%). After, Latinx students' completion was 75% that of White students (45%/60%).

The analysis also found significant differences between colleges. For example, in English the percentage point gap between Black and White students ranged from 8 points at one college to 49 points at another, with an average gap of 23 points. In math, one college saw Latinx students outperform White students by one percentage point, another college had a Latinx-White gap of 25 points, and the average Latinx-White gap in math completion was 14 points.

## For Readers Outside California

### AB 705

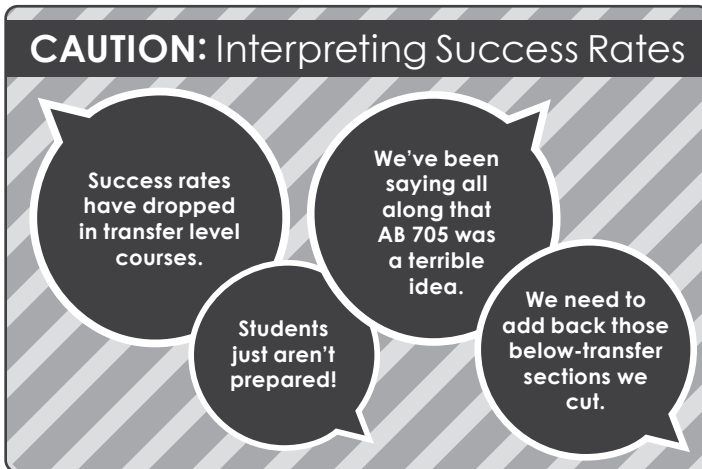
AB 705 is a California law that requires colleges to use high school grades to place students into English and math courses, restricts colleges from requiring students to take remedial prerequisites except in very narrow circumstances, and requires colleges to place students into the course where they have the best chance of completing transferable, college-level English and math within one year. For placement in ESL, colleges must use multiple measures to place degree-seeking students into the course where they have the best chance of completing transferable English composition within three years. Fall 2019 was the deadline for full implementation in English and math, fall 2020 for ESL.

### Transfer-Level English and Math

This is the term community colleges in California use to describe college-level courses that meet transferable English composition and quantitative reasoning requirements.

# Disrupting the Deficit Narrative about Early AB 705 Data

Commentary by CAP Executive Director Katie Hern



Perhaps not surprisingly, some California community colleges saw pass rates decline in transferable English and math this fall, as virtually all students were allowed to bypass remedial classes and enroll directly in the transfer level (see cover story "Big Gains at Strong AB 705 Implementers").

For some faculty, even a small increase in withdrawals or failure provides evidence that we should go back to making students take remedial courses. But this position only makes sense if we ignore how badly students fared in the past.

**At Victor Valley College, for example, just 4% of math students completed a transfer-level course in fall 2015, when the vast majority were required to begin in remedial classes.**

Last fall, when Victor Valley replaced almost all remedial math classes with corequisite support at the transfer level, 42% of students completed transfer-level math, a ten-fold increase.

As the college expanded access, average course success rates in introductory STEM courses dropped from 61% to 47%. While this leaves plenty of room for improvement, the changes enabled 462 more students to complete this critical milestone toward a degree, including 330 more Latinx students progressing on the STEM pathway. Can anyone honestly claim that students were better off before?

As campuses dig into their first year of AB 705 implementation data, this article offers three questions to keep conversations focused on ensuring that students have the best opportunity for success.

## 1. Are students more likely to complete a transfer-level course if they enroll directly or if they begin in a remedial class?

Before AB 705, if course success rates were low in transfer-level English or math, a common response was for colleges to place more students into remediation. Now, however, students have the right to begin in the course that gives them the best chance of completing transferable English and math requirements. If a college wants to exclude students from transfer-level classes, they must provide evidence that starting in a remedial class makes students more likely to eventually complete the transfer-level course (a metric called "throughput").

To date, [statewide research](#) has not identified any students who are better off starting in remedial English or math -- no racial/ethnic, economic, gender, or disability group. Even students with high school GPAs below 1.9 -- the lowest group in a statewide sample -- are more than three times as likely to complete college composition if they enroll directly than if they take even a single remedial course (43% vs. 12%).

As we assess the first year of AB 705, colleges should not revert to a myopic focus on transfer-level course success rates. Instead, we must examine our local throughput data and disaggregate it by race/ethnicity, income, disability, GPA, and other factors. If we can't identify a group of students that does better starting in a remedial course, remedial courses should not be on the table.





---

2. **Are all racial/ethnic groups more likely to complete transfer-level requirements?**

Many faculty are rightly concerned when they see success rates drop for a given racial/ethnic group, or if there are achievement gaps between groups. But here too we must be careful not to presume that remedial classes are the solution.

Consider this data: In fall 2015, 11% of Latinx students completed transfer-level math and 22% of White students across ten colleges (see cover story "Big Gains at AB 705 Strong Implementers"). In fall 2019, completion was 45% for Latinx students and 60% for White students at these colleges.

Proportionally, Latinx and White students are closer together -- Latinx completion used to be half that of White students' and now it is 75%. But the percentage-point gap between them has increased from 11 to 15 points. Further work will be needed to close equity gaps, but if all racial/ethnic groups are seeing completion gains, we are clearly moving in the right direction.

3. **How do success rates vary across different sections of the same course?**

In the past, when average success rates declined in a course, faculty have often concluded that students were not prepared. But what's missing from this thinking is teachers' own role in student outcomes. When success rates in different sections of a course range from 29% to 100%, it's clear that we can't just blame students for low success (see "Turning the Mirror on Ourselves" page 6).

Instead of rushing to the old deficit-based conclusion that students are not prepared, colleges should investigate what some faculty are doing that enables more than 80% of students to pass, while less than 40% pass their colleagues' classes down the hall. Colleges also need to support faculty to teach in the post-AB 705 context, such as through shared curricular materials, communities of practice where faculty can learn from each other, and opportunities to reflect on how they can better facilitate student success and equity.

Historically, every remedial course in a student's path has reduced their likelihood of achieving their educational goals, with a disproportionate impact on underrepresented students of color. AB 705 has done a lot to address the structural inequities of our system, but our work is far from complete.

As campuses examine data from their first year of AB 705 implementation, we must beware of calls to return to remedial practices of the past. We must interrupt the deficit narrative that says students "can't even..." or "don't even know..." and we must be especially wary of arguments using the language of equity to return to a system where the vast majority of Black and Latinx students had very little chance of earning a degree.

Instead, we should use the first year of AB 705 data to identify our next steps. How can we build upon the gains we've made? What problems need further attention? And how can we move beyond our old remedial thinking and develop **new** solutions together?



## Turning the Mirror onto Ourselves

By Leslie Henson and Hal Huntsman

---

In fall 2019, DeAnza College found that students' likelihood of passing a class depended heavily on which section they took.

During a session at this year's California Acceleration Project conference, Math, Science, Technology and Engineering Dean Jerry Rosenberg and Director of Institutional Research and Planning Mallory Newell shared data on the wide variation in success rates across individual sections of the same course at the college:

- In English composition, success rates ranged from 32% to 100%.
- In Statistics, success rates ranged from 29% to 100%.
- Students in the top ten sections of Statistics had at least a 90% chance of success. Students in the bottom ten sections had less than a 50% chance of success.
- In one Statistics section, Black, Latinx, Pacific Islander, and Filipinx students outperformed their white and Asian counterparts by ten percentage points. In another section the same term, these groups' success rates were 56 percentage points lower than white and Asian students.

What caused this large variation? Was it students' high school achievement levels? Course modality? Term? Time of day?

**“The instructor factor,” says Newell, “leads to the widest variation in students’ success.”**

### Research into Faculty Impact on Student Outcomes

A growing body of research points to the role of faculty attitudes and behavior in students' success. One large [study](#) compared STEM teachers who had what Carol Dweck calls a “growth mindset” -- the belief that intelligence and ability can be developed -- and faculty who held a “fixed mindset” (“To be honest, students have a certain amount of intelligence, and they really can't do much to change it”). They found that students were not only more motivated to learn when faculty believed intelligence could be grown, but that courses taught by growth-mindset faculty had racial/ethnic equity gaps half the size of their fixed-mindset colleagues.

Other studies examine the role of “microaffirmations” on student success. Do teachers nod and make eye contact with students? Do they call on students of different races, genders and performance levels equally? Are they using inclusive language — for instance, saying “families” instead of “parents” or “mothers and fathers”? Do they openly praise students for a wide range of actions, such as submitting an assignment early, asking questions, or helping someone else?

Todd Pittinsky, professor of psychology and organizational behavior at Stony Brook University, says that microaffirmations like these “can make students more optimistic, confident, and resilient in their education and — in the long run — more committed to seeing it through.”

“The effects of microaffirmations, like the effects of microaggressions, are small but add up,” says Pittinsky. “Microaffirmations communicate to students that they're welcome, visible, and capable of performing well.”

### Examining Our Own Practice

The session by DeAnza's Newell and Rosenberg was one of several at the CAP conference focusing on how faculty can examine and improve their own role in student success and equity.

City College of San Francisco offers a summer institute during which faculty reflect on disaggregated course success data from their own classes. English instructor Mitra Sapienza, who co-leads the institute, says that the process made her realize she wasn't calling on students with language barriers and that this was negatively affecting her Asian students. She now does more community-building and small-group work to create many avenues for participation, and she is more intentional about building relationships with all of her students.

“Seeing my own data was humbling and thought-provoking,” says English instructor and community of practice participant Kyle Hill. “I became more aware of where equity gaps exist in my classes, and I was anxious to see immediate improvement in my data.”

In another session, Foothill College math instructor Patrick Morriss said he realized that his grading policies were counterproductive to student learning, success, and equitable outcomes. Over years, he developed assessment policies that do away with points, encourage recovery from setbacks, and accept unanticipated evidence of learning. Morriss's success rates are now higher than the department average, with smaller disparities between racial groups.

**“Being equity minded means taking personal and institutional responsibility,” said keynote speaker Lasana Hotep, who serves as Executive Director of the Equity Institute at Skyline College.**

He pointed out that inequity in education can't be solved with the same deficit thinking towards students that created it. “We have to change practices.”

---

## Taking High-Challenge, High-Support Pedagogy Online

When the COVID-19 shelter-in-place orders went into effect in early spring, faculty had to learn to teach online in a matter of days, while managing their own stress and often juggling distance learning for their children.

In addition to technical training in Zoom and course management systems, teachers needed pedagogical support. How would they create community and build collaboration when classes couldn't meet in person? How would they attend to students' affective needs, especially given the added stressors everyone was facing? How would they build in flexibility and compassion for students dealing with sudden job losses or being front-line workers in grocery stores and nursing homes?

To support faculty in this transition, CAP hosted a series of webinars, now available [online](#), led by experienced math, English, and ESL faculty from across the CAP network.

- [Tips and Tricks for Taking English Corequisites Online](#): Citrus College English instructor Jamie Dingman demonstrates how to adapt [CAP's design principles](#) in online classes, including support for students' affective needs, low-stakes collaborative practice, and just-in-time remediation. Dingman has been teaching corequisite-supported English composition since spring 2018.

- [Tips and Tricks for Taking ESL Courses Online](#): Cuyamaca ESL Professor Guillermo Colls shares how he and his colleagues built CAP's instructional design principles into online ESL courses at Cuyamaca College, east of San Diego.
- [Tips for Maintaining a High Challenge, High Support Math Pedagogy in Online Corequisite Courses](#): Experienced online instructors Professors Tracy Nguyen and Victoria Dominguez of Citrus College share how they helped to quickly move online with the interactive pedagogy from their open-access transfer-level math corequisites, with a focus on teaching Statistics and Applied Calculus with corequisite support.
- [Statistics with Corequisite Support Online -- Tips for Supporting Students and Their Learning](#): Long-time CAP teachers Rachel Polakoski from Cuyamaca College and Kathy Kubo from College of the Canyons share their strategies for using high-support, high-challenge pedagogy in online Statistics with corequisite support.

For more webinars and resources, visit [www.AccelerationProject.org/Publications](http://www.AccelerationProject.org/Publications).



Screenshot of Powerpoint slide from Taking High-Challenge, High-Support Pedagogy Online CAP webinar

# Big Gains for Black and Latinx Students in STEM

By Hal Huntsman

While traditional remedial courses have a poor track record for producing diversity in science, technology, engineering and math fields (STEM), some have been concerned that eliminating these courses would shrink STEM pipelines and potentially limit access for underrepresented students of color. New data from several California community colleges suggest that these fears are unfounded.

At Citrus, Cuyamaca, and Victor Valley colleges, traditional remedial courses have been largely replaced by corequisite-support models of College Algebra and Precalculus, the introductory gateway courses for STEM students. The result? All three colleges are dramatically expanding their STEM offerings, and many more students of color are progressing in these disciplines. The gains for Black and Latinx students have been particularly notable, because these groups have been historically underrepresented in STEM fields.

Take Victor Valley College. In fall 2019, almost all students began in a transfer-level math course, including underprepared students with an interest in STEM. That semester, four times as many students successfully passed College Algebra as in the previous year, with overall completion increasing from 172 to 695 students. Among Latinx students, completion increased from 97 to 427 students, and among Black students (a small population at the college) completion increased from 11 to 45 students.

**“We have seen huge increases in the volume of successful students from all ethnicities in College Algebra,”**

says math chair Steve Toner, noting that by fall 2020, Victor Valley will no longer offer traditional remedial math courses.

Similar trends are occurring at Cuyamaca College, which began eliminating traditional remedial courses and replacing them with corequisite models in [fall 2016](#).

“We have seen a huge transformation in the diversity of students taking Precalculus,” says math chair Tammi Marshall. “This is leading to a similar increase in the number of students of color taking higher STEM math classes. We are seeing this also impact our biology, chemistry, physics, and engineering programs, as more students are making it into these courses.”

At Cuyamaca, Precalculus enrollment nearly tripled between fall 2015 and fall 2019, increasing from 95 to 265 students overall, with enrollment by Black and Latinx students more than quadrupling. In fall 2019, almost twice as many Black and Latinx students successfully completed the course as had before the reforms. Additionally, enrollment in the next course, Calculus I, has nearly doubled, with the percentage of Black and Latinx students increasing to match their representation in the college's overall population.

At Citrus College, Precalculus enrollment is now 2.5 times higher overall, and completion among Latinx students is more than double what it was before the reforms, increasing from 61 to 136 students.

These early results provide compelling evidence for AB 705's potential to not only expand STEM pipelines but to increase the diversity of those pipelines, with especially large gains for Black and Latinx students.

“It was exciting to see high success rates among students who would have traditionally placed one or two levels below the transfer level when they made use of the additional support,” says Toner from Victor Valley College. “It showed us that hard work and determination along with support can help students succeed at much higher rates.”

## Latinx Students in Introductory STEM (Pre-Calculus or College Algebra)

Colleges that Have Largely Replaced Traditional Remedial Math with Corequisite Models

College	Latinx Enrollment (pre- & post-reform)	Latinx Successful Completion* (pre- & post-reform)
Citrus College	3.4 x higher 89 → 299 students	2.2 x higher 61 → 136 students
Cuyamaca College	4.0 x higher 27 → 107 students	2.2 x higher 24 → 53 students
Victor Valley College	4.1 x higher 231 → 945 students	4.4 x higher 97 → 427 students

\* Course success = Earning C or higher



## Free Online Statistics Course Available through Canvas

By Hal Huntsman

"When I first taught Statistics, I taught out of a popular textbook that focused on procedures," says CAP Co-Founder Myra Snell, who was not trained in statistics during her master's program in pure mathematics. "I could work the problems, but I didn't really understand some of the big concepts."

Snell notes that this is a common experience for math faculty who are new to teaching statistics. And as colleges increase the number of statistics sections they offer post-AB 705, more and more math faculty are teaching the course.

Fortunately, a new online Statistics course is available free to students and faculty through Canvas, and it focuses on building deep statistical understanding through real-world projects. The course was developed by faculty from three California community colleges, drawing upon both [CAP design principles](#) for high-challenge, high-support pedagogy and content from the Open Learning Initiative at Carnegie-Mellon.

The online materials include more than 180 interactive exercises, quizzes with immediate feedback, a companion workbook with over 70 class activities, labs, and projects, and an instructor's manual with full facilitation notes.

Snell has worked with teachers from multiple colleges as they use the materials for the first time, and she says faculty note that students are understanding big ideas better, like the logic of a hypothesis test, and they're doing a much better job interpreting their results.

Faculty also report that it made the sudden shift to online instruction much easier than for colleagues using traditional textbooks.

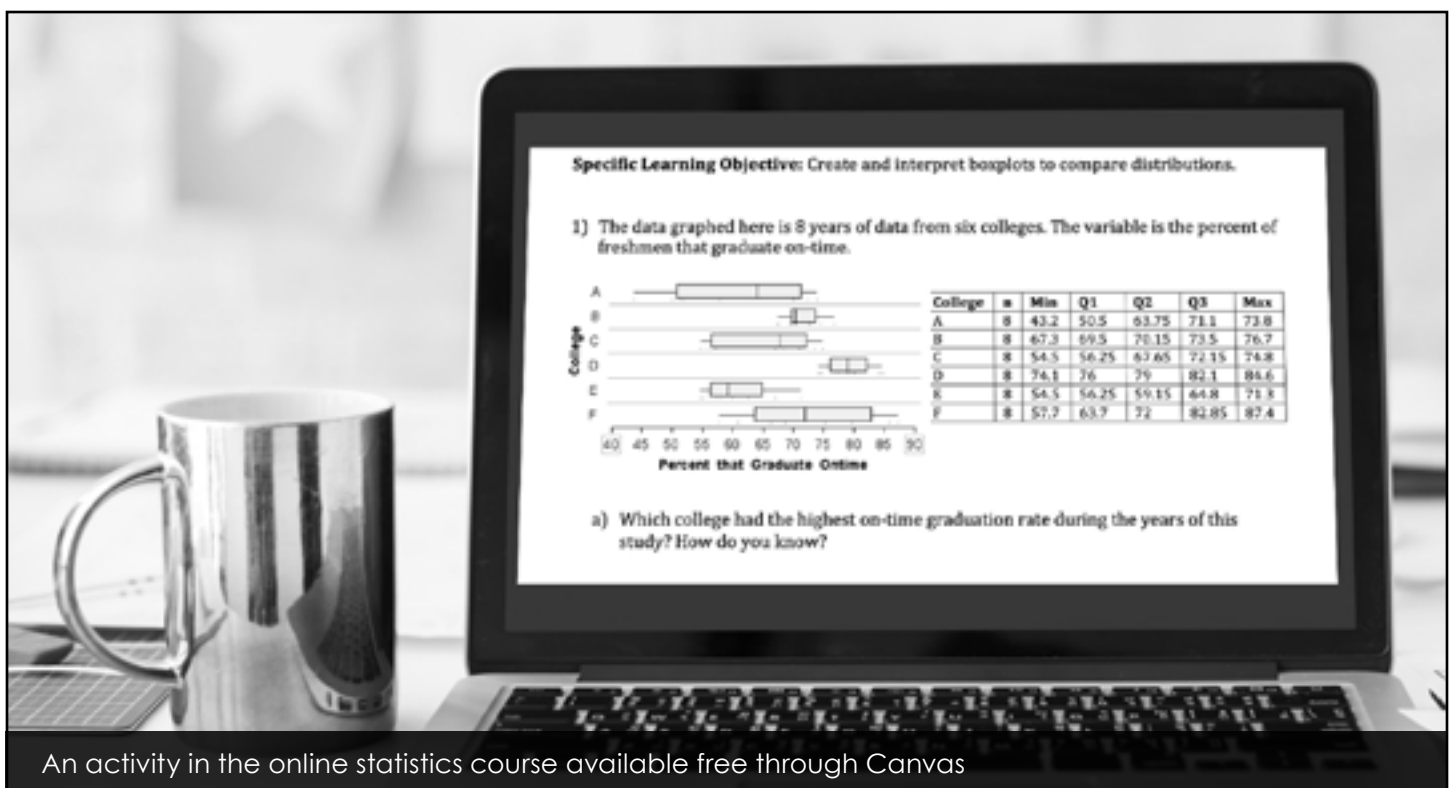
Kathy Kubo, math professor at College of the Canyons, is in her second semester using the course. "After the adjustment period you expect with any set of new materials, my workload has been lightened," she says, noting that she likes being able to customize the content. "I can change or add to anything I want, adjusting for my local context, either in-person or fully online."

Kubo's students like it too, especially the fact that it is free.

"I feel like being able to see my mistakes along with the brief explanation that accompanied the incorrect answer helped me see how to correct them," says Jaclyn Caloca.

"Textbooks can be really dry, especially when it comes to math," says Jenny Weber. "Canvas is a happily welcome alternative!"

All materials are available online (<https://4cd.instructure.com/courses/48111>) under a CC BY license that allows users to adapt freely as long as they give attribution credit. The materials meet standards for accessibility in the CVC-OEI Course Design Rubric and WCAG 2.1 (formal validation pending).



An activity in the online statistics course available free through Canvas

## Pedagogy in the B-STEM Corequisite Classroom

By Hal Huntsman

Before COVID-19 sent classes online, Citrus College math instructor Sophia Lee would begin her Precalculus with Support lessons with students at white boards all around the room working on a “meaty” and culturally relevant problem about, say, the weight of a baby at birth or the path of a yo-yo, using math that they hadn’t yet discussed in class.

In the two-hour class, students would spend about half the time working on the problem with each other, then go to their desks to work in groups on three to five more related problems. Finally, Lee would finish up the class by discussing the methods they used, summarizing and making connections to the larger abstractions and definitions they were learning. This process of moving from the specific to the general, says Lee, “reverses the order of the traditional lecture” and mimics the way mathematicians create new theorems.

**“We don’t spend more time on each topic,” says Lee. “We do a few problems more deeply, and that is enough for most students to understand how to do most other problems.”**

Lee’s pedagogy is part of a larger institutional commitment at Citrus to transform remediation in both [English](#) and math. In fall 2019, the college was one of just 10 in the state to meet the [strong-implementation benchmark for AB 705](#) in both English and math, with remedial courses constituting 10% or less of introductory offerings. Instead of traditional remedial courses, under-prepared and under-confident students enroll in transferable courses with extra support provided through one or two linked corequisite units taught by the same instructor. Citrus is especially noteworthy in allowing any student to enroll in transferable Business and STEM courses, whether or not they have completed Algebra II in the past.

The changes have more than doubled the number of students completing transfer-level math at the college, increasing from 672 to 1,535 students between fall 2015 and fall 2019. Completion of Precalculus, the introductory gateway course for STEM fields, has doubled, with especially strong gains for the college’s large Latinx community (see “Big Gains for Black and Latinx Students in STEM,” page 11). And while some California colleges have seen pass rates drop as more students enroll in introductory transfer-level math, Citrus has seen a modest improvement in the percentage of students earning a C or higher in these courses (57% in fall 2015; 60% in fall 2019).

Dean of Mathematics and Business Victoria Dominguez points to AB 705 changes to placement and corequisite models as a primary driver of the college’s completion and equity gains: “Students can’t succeed in a transfer-level class without access to the class.”

Dominguez notes that Citrus has also transformed math classrooms with collaborative furniture, white boards, and manipulatives, and that faculty are supported through biweekly communities of practice with others teaching the same course. Across the department, faculty are using activities that support students’ affective needs, connecting students with support services, and teaching with “a strong focus on groupwork instead of lecture, where students work at the whiteboards often during each class session, productively-struggling to solve problems together.”

Of course, teaching had to shift when classes went online in March because of COVID-19, but Citrus faculty are working to adapt their pedagogy online. “We tried to take it as an opportunity to learn about Canvas, about Zoom, and other technologies,” says Dominguez. “If ever there was a time to have a growth mindset, that was it.”

In Canvas course shells, students complete exercises addressing the affective domain, and instructors use texting apps to quickly get in touch with those who are falling behind or not attending. And many faculty combine asynchronous assignments that could be completed at any time with synchronous sessions offered at scheduled days and times. This enables students to continue to work together, collaborating on problems in break out rooms and then reporting their solutions back in the main session.

The goal, says Lee, is “to provide constant opportunities for students to discuss in a collaborative, low-pressure, environment. Research has shown that this kind environment helps build a sense of belonging for underrepresented minorities, who often feel isolated in STEM. A sense of belonging may be the key to closing the equity gap and increasing the number of STEM degrees.”



# Math Equity Gains at Citrus College

By Hal Huntsman

After eliminating nearly all sections of traditional remedial math, Citrus College saw dramatic growth in the number of African-American and Latinx students completing transfer-level math. And though racial/ethnic equity gaps remain that will require ongoing attention, completion gaps have narrowed for first-generation and low-income students at the college.

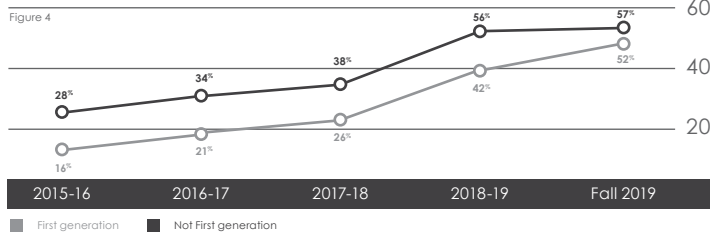
"The results are encouraging," says Dean of Math and Business Victoria Dominguez. "Fall 2019 is the first semester where three transfer-level math courses have been offered with corequisite support (Statistics, Applied Calculus and Precalculus). We anticipate increasing the number of sections of these corequisite courses as student demand increases."

- The number of Latinx students who successfully completed transfer-level math nearly tripled between Fall 2015 and 2019, increasing from 358 to 989 students.
- While Citrus' African-American student population is small, their completion of transfer-level math doubled during this time, increasing from 16 to 35 students.

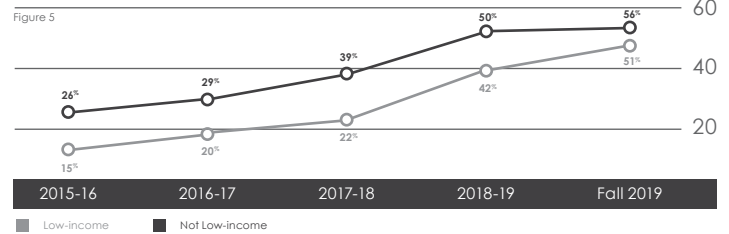
- First-generation students' completion of transfer-level math was just five percentage points lower than their non-first generation peers (52% vs. 57%), a substantial improvement over the 14-point gap the prior year.
- Low-income students' completion of transfer-level math was also just five percentage points lower than non-low-income students (51% vs. 56%), again a substantial improvement over the prior year's 12-point gap.

Dominguez believes that the college's implementation of guided pathways will help address the remaining equity gaps. "We are creating success teams for each of our seven career and academic pathways, to provide more intensive and inclusive outreach and counseling services to students and career events, specific to each pathway."

**One-Year Completion of Transfer-Level Math**  
by First-Generation Status



**One-Year Completion of Transfer-Level Math**  
by income status



Collaboration in a transfer-level math class at Citrus College

## “Our Eyes and Ears on the Ground”: Using Embedded Tutors in English Composition

By Leslie Henson

Solano College English teacher Jose Cortes says he didn't worry when a student said “No thanks” when he offered to help her with an assignment during the computer lab portion of his corequisite English course. Nor was Cortes surprised when, just a few minutes later, the same student happily began working on the assignment with the course's embedded tutor. Cortes, who coordinates the embedded tutor program, says,

**“That’s the beauty of having an embedded tutor. Different students connect and feel more safe with different people, different personalities.”**

In traditional tutoring models, tutors work in writing or learning centers that are separate from college classrooms. In the embedded model, tutors are assigned to particular sections of a class and work closely with the faculty to support students during class time.

Students' familiarity with an embedded tutor can also spur them to seek help outside of class, says Woodland Community College English professor Gina Jones, who created and coordinates the embedded tutor program for Woodland's Lake County campus. “Students can see a familiar face when they walk into the writing center. Even if they come in an hour before class, they can get help making a game plan for starting the assignment.”

At Solano, tutors have been embedded in every section of College English with Support since the corequisite course was first offered in spring 2016. While it's difficult to know how big of a factor embedded tutors are in the course's success, Cortes says, “Success rates in College English with Support are about six percentage points higher than in standalone English composition. It's been pretty consistent.”

And because they aren't responsible for grading students' work, embedded tutors “are in a position to attend to the affective domain in a much more in-the-moment way,” says Cortes. “They can identify potential student needs, especially for those who might have had a shift in mood or behavior, such as chronic absences or not turning in work when previously the student was. They can be our eyes and ears on the ground.”

When classes went online with COVID-19, Skyline College English teacher Katie Hern says her embedded tutor “was key to helping keep students connected, or getting them reconnected if they drifted away.” The tutor helped keep track of which students had posted to discussion boards, reached out by text and phone when students were falling behind, and scheduled individual

Zoom sessions on everything from using Canvas and Google docs, to generating ideas for papers, to locating relevant research.

At Woodland, Jones provides tutors with a list of daily activities, including responding to informal writing assignments, keeping track of which students are behind or have missed class, and creating writing prompts that serve as daily check-ins with students. She also trains tutors in “the shoulder tap,” a technique for checking in with students who've been absent or missed assignments. “The tutor's job is to say, ‘I'm so glad you're here, how can I get you caught up,’” says Jones, “not ‘Where have you been?’ Tutors are there to be the cheerleaders, not the one to tell a student they aren't going to pass the class.”

At Woodland, tutors are students who have passed transfer-level composition, and they are paid through Federal Work Study funds. At Solano, embedded tutors are graduate students who want to become community college instructors, and they are paid as temporary classified staff. Both Solano and Woodland compensate teachers and tutors for meetings and training sessions.

Cortes says that colleges that want to start an embedded tutor program need to factor in time for program coordinators to schedule, train, and recruit tutors, as well as time to replace tutors who go on to other jobs. Cortes spends 20% of his full-time teaching contract coordinating the program, which is now struggling with a loss of funding.

Teachers' and students' feedback has been overwhelmingly positive, says Cortes.

“I do believe having an embedded tutor in ALL courses is beneficial for both the student and the professor,” one student wrote in an anonymous program survey. “I would like to see more if possible.”



Skyline College embedded tutor Monique Ubungen works with students in a corequisite English composition class.



## Using Podcasts and Infographics in English Composition

By Leslie Henson

---

In one [unit](#) of Jennifer Nellis' College English with Support course at Long Beach City College, students explore the concept of microaggressions -- everyday comments or actions that disparage or put down a member of a marginalized group (e.g., racial/ethnic minorities). Students analyze a variety of texts about microaggressions, including an academic [article](#), a [blog](#) post, a Tumblr [photo](#) campaign, a microaggression [game](#) simulator, and an [infographic](#). Students consider the rhetoric of these pieces -- for example, how the author establishes credibility, the context, genre, design elements, and how the thesis is supported.

Next they imagine that an organization or business has put out a request for proposals for a project that will help them to address microaggressions in their specific context, such as a podcast, poster, infographic, video, website, blog, or article. In a [sequence](#) of assignments, students produce a proposal to this organization, create their piece, and conduct rhetorical evaluations of their own and other students' work.

This approach -- known as multimodal composition, or multimodality -- is well-established in the field of English composition. According to the National Council of Teachers of English, multimodality "refers to the various resources—among them, images, sounds, document design, and graphics—that authors tap to create meaning in all kinds of texts...Multimodality reminds us of the richness of texts, and of the many ways we create meaning."

To model multimodality for students, Nellis presents her course syllabus and assignment prompts as newsletters, showing how to use a modality's design features -- in this case, sidebars, columns, headings, pull-out quotations -- for effective communication.

Nellis says she has been consistently impressed with students' work and how the project enables them to bring their own cultural voices into the classroom. One student used her experience of microaggressions in foster care to produce a pamphlet educating foster care families and professionals about the impact of microaggressions.

In his final self-evaluation, one student commented that moving beyond standard academic texts "changes the norm of the classroom feeling like a 9-5 job to a place where you can be creative while still learning, almost like having fun without realizing the large amount of work you are actually doing."

"Because my partner and I made a project for Instagram, people actually looked at it, not just a teacher," said another student. "We started a conversation with strangers and had followers. It wasn't just an assignment. We were building a community."

"For the first time, I wasn't doing an assignment for a teacher, for a grade," said another. "I completed the

assignment to understand the material, myself, and my audience."

In the final series of assignments for her course, Nellis asks students to choose an event and find complex analyses from different perspectives. Students have investigated protests in Hong Kong and Ecuador, the Pulse nightclub shooting, companies contracting with ICE, and other current events. The assignments require plenty of traditional academic work: students compose annotated bibliographies and a comparative analysis of two authors' perspectives. But before writing the analysis, they create [podcasts](#) that put two authors into dialogue.

Nellis says some students initially thought of this as "extra work" before coming to see how it benefited them "by prolonging the discovery phase of the writing process."

One student said that podcasting helped him "come up with ideas because I was relaxed. Then, I could prepare for the formal paper."

"Talking about the ideas out loud for the podcast let me notice new ideas or ideas that repeated," said another student. "It's like singing in the shower. You think you sound good, like in a paper. But then you listen to yourself when the water isn't running, and it's really bad. The podcast helped me hear the bad."

Not only did students' academic writing improve, says Nellis, but their reading and understanding of rhetoric did as well. She says she overheard a student who was working on a podcast say, "No, that author is a lawyer, so she'd be more direct."

"Students are learning to read to understand an author's perspective, whereas before they were just reading to get information," says Nellis. As a result, she says, "Their comparative analyses were stronger." Most of all, she says, the podcast assignment has "helped students understand that the purpose of academic writing is to create new knowledge."

Prior to COVID-19, Nellis says some students used campus computer labs to make their podcasts. Since Long Beach will still be online for fall 2020, Nellis says she is considering learning free podcasting apps so that she can teach them to her students. She is also considering other ways to adapt to the new context, like allowing students to ask siblings to play the role of one of the authors in a podcast.

Whatever happens, Nellis says she doesn't want to let go of multimodality. She loves what students have been able to create, how multimodality transforms the classroom culture, and how students have become "more flexible, thoughtful writers."

For herself, Nellis says that multimodality has meant "rediscovering excitement and love in and out of the classroom mid-career."

# Palomar Leads in AB 705 Implementation for English Language Learners

By Leslie Henson

---

As the fall 2020 deadline nears for implementing AB 705 in English language programs, Palomar College is ahead of many others in the state in implementing practices shown to increase ESL student completion. This includes streamlining the academic ESL pathway to just three courses, abandoning standardized placement testing, creating a new ESL version of transfer-level composition, and securing transfer credit for key ESL courses.

Under AB 705, colleges must allow degree-seeking ESL students to begin in the course that gives them the best chance of completing transfer-level English composition within three years. At some colleges, compliance has been interpreted to mean a five-course ESL sequence, followed by English composition. But Palomar ESL faculty know from experience that this structure does not give students the best chance of completion.

Palomar previously offered both a streamlined, three-course pathway to transfer-level composition and a five-course traditional pathway. While students could complete transfer-level composition within three years in the longer sequence, students in the streamlined pathway were twice as likely to do so, says ESL instructor Lawrence Hamilton Lawson. As of fall 2020, Palomar is discontinuing its five-course ESL sequence.

**“It doesn’t necessarily require years or many semesters of ESL education to achieve success in transfer-level courses,” says department chair Tracy Fung. “We’ve seen students succeed in the streamlined path already, so we know it can work for the range of students.”**

Palomar’s data echoes a [2019 analysis](#) by the Multiple Measures Assessment Project (MMAP), which found that when colleges’ ESL sequence includes 3 or fewer levels, 31% of students complete transfer-level English in three years or less, but just 16% do at colleges where the ESL sequence includes five or more levels.

Palomar has also transformed the way it places students into courses. Following statewide research by the [Multiple Measures Assessment Project](#) (see slide 28), students who attended U.S. high schools are placed directly into transfer-level composition based on high

school GPA and English coursework, regardless of whether they took English language development courses. Students can choose to take the ESL or English version of the course, and with or without a corequisite support course.

For students electing to take ESL courses, the college now uses a guided self-placement process in which students place themselves into either the academic ESL pathway or other ESL courses, like English for everyday life, conversation, career skills, computer skills, and citizenship. Students choose their starting level in academic ESL courses by reviewing one-paragraph student writing samples and brief descriptions of the reading and writing required for each class.

Another step the department has taken to increase students’ likelihood of completion is to secure transfer articulation credit for academic ESL courses. According to [research](#) from the Public Policy Institute of California, students at colleges where ESL courses earn transferable credits are 16 percentage points more likely to complete transfer-level English in three years than at colleges where ESL coursework is non-transferable. Fung says that Palomar’s middle-level ESL course now counts for transferable elective credit, and the upper-level counts for general education credit in the humanities at both the University of California and the California State University.

A final innovation Palomar will launch in Fall 2020 is an ESL version of transfer-level English composition taught by ESL faculty and open to any ESL student through self-placement. “ESL students can struggle in courses designed primarily for native-speakers because there’s a lot of assumed knowledge in the readings and even pop culture references that teachers make in class to try to connect with students,” says Fung. Despite the positive motivation behind these references, she says, “ESL students have no idea what their teacher is talking about.”

In an ESL version of transfer-level English composition, the class can meet the same outcomes as the standard course while helping students unpack cultural references, says Lawson. It can also provide “linguistic shortcuts for students that haven’t been exposed to native English their entire life -- the grammatical patterns, the rhetorical patterns, and the linguistic patterns.”

Lawson says that ESL courses also tend to include “more time scaffolding the writing process in class instead of pushing instruction in these areas out to the tutoring center or to solo activities, because that’s where ESL students lose confidence.”

Pedagogically, Palomar's academic ESL courses are taught following California Acceleration Project [design principles](#), and the teaching of reading and writing are integrated. "We start with the larger conversation," says Lawson. "Then as we go along when we see grammar errors popping up, we stop and talk about those things in the context of students' writing. And it's worked out so much better."

Lawson says that students are still making progress with their English even if they have errors in things like third person, articles, and prepositions. "Those are the last three things that non-native speakers really master before becoming fluent," he says, "and errors in those areas really don't impede communication." The way teachers approach these errors, he says, "can either crush students' confidence, or it can improve their competence."

Fung says all of these innovations are part of what she sees as a collaborative, statewide movement to help ESL students meet their goals. "Everybody has come together with this joint concern for all of our students that I think is something I haven't seen in any other way in the past 15 years," she says.

**"We're seeing more interest in student success than we ever have before. I love that about this movement and about these changes."**

### Palomar College ESL Flow Chart

**ESL 45 (5 Units)/NESL 945 (Non-credit)**  
Reading/Writing Essentials I

**ESL 105 (6 Units)/NESL 975 (Non-credit)**  
Accelerated Written Communication I  
UC/CSU Elective units

**ESL 106 (6 Units)**  
Accelerated Written Communication II  
UC/CSU Humanities units

**ESL 110 (4 Units)**  
College Composition  
for non-native speakers

or

**ESL 100 (4 Units)**  
English Composition

UC/CSU Transfer-level composition

#### Notes

Please note: The ESL guided self-placement process will help students determine which ESL courses they would like to take. Students may take one or more ESL classes prior to transfer-level composition if they choose. ESL 105, 106, and 110 are all associate degree applicable as well as transferable. ESL 106 transfers to CSU/UC as transfer-level composition like English 100.

Other non-credit courses for beginning level students are available, as well as ESL courses for students interested in pronunciation, grammar, conversation, career skills, computer skills, etc.

# Corequisite Support for ESL Learners in English Composition

By Leslie Henson

One day, when Kelicia Galvin was working in the writing center at Irvine Valley College, a student came in for help with an assignment about the American Dream from her freshman composition course. The student was an immigrant, and English was not her first language. "She could do the writing," says Galvin, who teaches English and ESL at the college. "She just didn't know what 'the American Dream' was."

In standard sections of freshman composition, faculty often include materials that assume shared background knowledge about American history and culture. They also don't typically provide explicit instruction in English language conventions, like the fact that "vocabulary" is never pluralized or the verb tenses to use when introducing material from a source into an essay. "ESL students can get left behind," says Sacramento City College ESL professor and department chair Duane Leonard.

This awareness led faculty at Irvine Valley, Sacramento City, and Palomar colleges to develop new corequisite models of English composition tailored to the needs of English language learners.

These models are especially important in the context of California's AB 705, a law that requires colleges to place ESL students in the course that gives them the best chance of completing transfer-level English within a three-year timeframe. Statewide [research](#) shows that English language learners who graduated from a U.S. high school are at least twice as likely to complete transfer-level English if they enroll directly rather than taking a stand-alone ESL course below transfer level -- regardless of how many years of U.S. education they had, what their GPA was, or whether they took English language development classes in high school.

Leonard says that setting aside sections of transfer-level English for ESL students gives them "a safe space for asking questions about American society or making comments they otherwise wouldn't make. Students will share their struggle learning English, being in communities, or failing because they're being judged for their English. There is a lot of team building based on that common experience, and students become more confident to speak in class."

In fall 2019, Leonard says that 23 out of 26 students passed his ESL-targeted College Composition with Support. He notes that students bring enormous strengths to the classroom: "Most ESL students have already overcome incredible obstacles to get their education."

ESL teacher and department co-chair Rebecca Martinez Beck says that the ESL corequisite at Irvine Valley differs from the standard English composition corequisite because it focuses less on "developmental and studenting issues" and more on "language and linguistic support." In the ESL corequisite, she says, "I don't have to spend a lot of time saying you need to buy your books. They're ready. They're excited to be there."

"Many of the students who take the class already have degrees," says Galvin. "They just need help to learn the language and the culture."

When ESL students do have developmental writing needs, Galvin says she can count on them to "take the time to learn what they need to know." In spring 2020, her corequisite composition class included three students who had never written an essay. "One student was in his 60s," Galvin says, "and his first essay had no structure and included plagiarized material. But after looking at my class notes, coming to my office hours, and working with the supplemental instructor, he was able to earn a B on his third essay."

Beck says she gets upset when she hears teachers say, "They don't know the verb tenses so they can't read this or write that."

"No native speaker knows how to use the future perfect progressive," she says. "Don't teach twelve verb tenses when we only use five. It's not about dry grammar instruction. That's what makes students hate English and writing, because they have to have the form before they can add content, instead of adding content and fixing form later."

Just as in a standard freshman composition course, the primary focus of these models is reading challenging texts, doing research, and making strong academic arguments. As students do this work, faculty pay attention for the language issues coming up in their drafts. "I see what they need first," says Galvin, "and then I mold that ESL coreq to what they need."

The one drawback to creating ESL-designated sections of composition, says Leonard, is that doing so "can convey that composition teachers don't have to consider these students' needs in their own classes, or suggest that ESL students are remedial."

Galvin bristles at the idea that ESL students aren't capable of transfer-level work. She says, "Language learners aren't dumb. They just don't have the language to express their thoughts. It's our job to give them that language. It's our job to teach."



## The California Acceleration Project

Supporting the State's 115 Community Colleges to Transform Remediation to Increase Student Completion and Equity

[www.AccelerationProject.org](http://www.AccelerationProject.org)