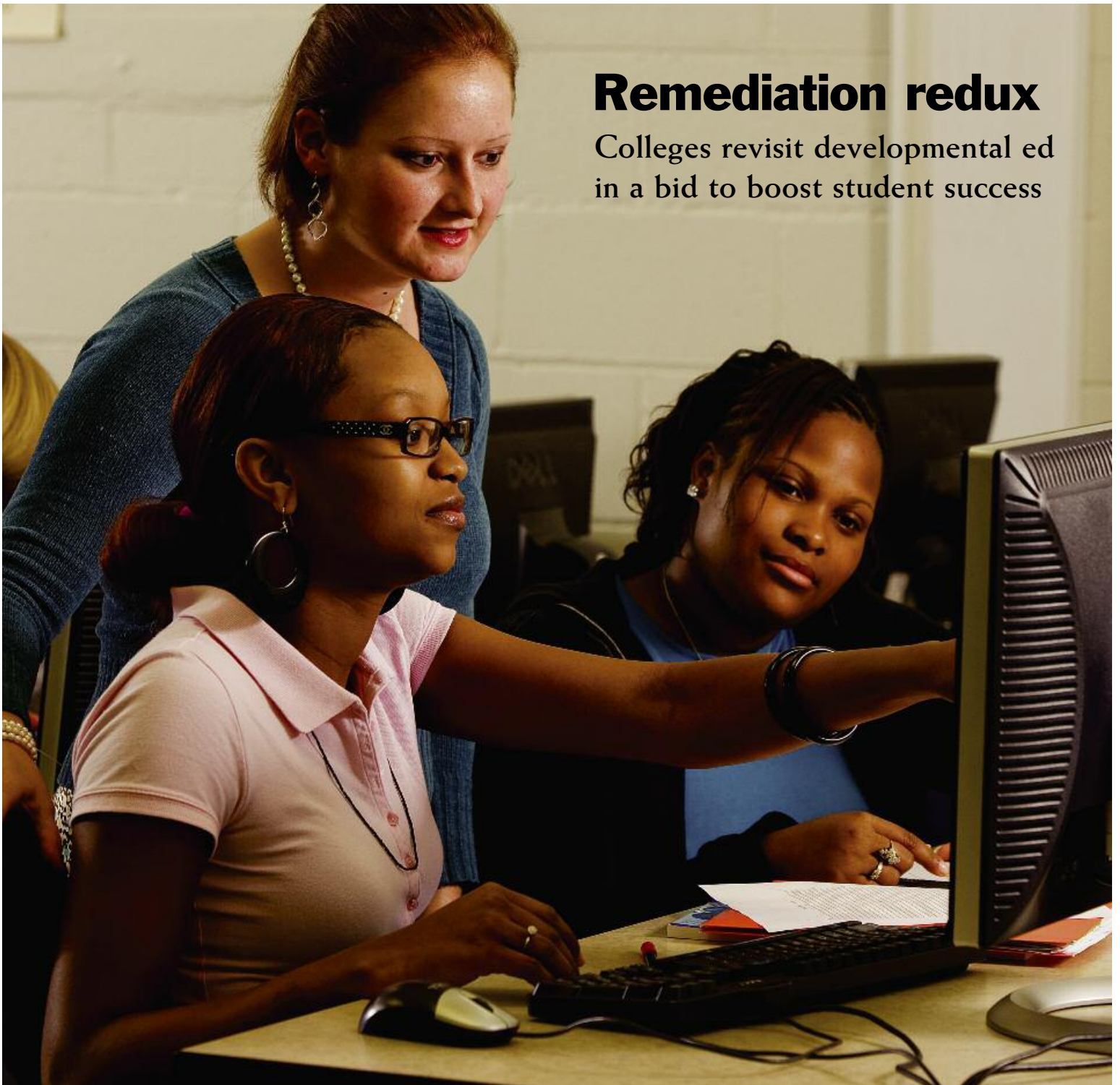


LUMINA FOUNDATION

FOCUS™

Fall 2008



Remediation redux

Colleges revisit developmental ed
in a bid to boost student success



An amazing turnaround: Page 2



Math in the hallway: Page 17



A teacher who's been there: Page 18

On the cover: Rosa Hart (standing), a Structured Learning Assistant at Austin Peay State University in Clarksville, Tenn., works on mathematical concepts with first-year students Delancia Davis (left) and Brittaney Scott.

PRESIDENT'S MESSAGE

Education equals opportunity; it always has. And in today's rapidly changing global economy, it's increasingly clear that **E** higher education is the real factor in that equation. Tomorrow's jobs – and the opportunity for individual advancement and social stability that those jobs represent – will require college-level skills.

Unfortunately, for a variety of reasons, increasing numbers of students – both traditional-age students and adults – are unprepared for college-level work. Before they can begin to earn those high-quality degrees that are so vital to our nation's future, these students need an academic leg up, typically in math or English. They need refresher courses, supplemental instruction, what today is often called "developmental education."

In the not-so-distant bad old days (and too often still today), many of these students were all but written off – banished to underfunded and marginally staffed "remedial" programs.

We can no longer afford to follow that route. All students who take that first step through the college door, no matter how tentative, deserve every chance to succeed.

After all, they've made the choice to pursue higher education, and that choice represents an opportunity, not just for them as individuals, but for all of us as a nation.

We *need* these students to succeed.

One important way to foster that success is to change the dynamic of developmental education, to expand and enhance it – to boost its rate of return and its reputation.

That's what this issue of *Lumina Foundation Focus* is about: showcasing efforts to improve the effectiveness and increase the scope of developmental education at the nation's colleges and universities.

In this issue, you'll meet inspiring people on both sides of the successful dev-ed formula: instructors and administrators who offer supplemental learning that is innovative and effective, as well as students who use such courses as a springboard, not just to academic success, but to better lives. For example:

- In California, you'll read about Lorena Corona, who began her academic career as a scared, young single mother in a community college dev-ed class and wound up an Ivy League graduate.
- In Florida, you'll meet Ryan Kasha, who overcame his own childhood experiences in "special classes" to earn two master's degrees and become an inspired (and inspiring) teacher of developmental math.
- In Tennessee, you'll visit a state university that has made developmental education its core mission, instituting a comprehensive Structural Learning Assistance program that was five years in the making.

All of these examples, and countless others on campuses all over the nation, show that developmental education – and attitudes toward it – are changing. Those changes are sorely needed. In today's America, and especially in the nation we are becoming, more and more students will need more help to reach their academic and career goals. And we all have a stake in the success of those students.

In this issue of *Focus*, we celebrate a few of these successes and shine a light on the dedicated people who work every day to make student success a reality. We hope their stories underscore the increasing importance of developmental education to the nation's future, and we urge you to join us in pushing for even more improvement in this critical area.

Jamie P. Merisotis
President and CEO
Lumina Foundation for Education





Lorena Corona began at California's Chaffey College in 2000 as a welfare mother with virtually no usable English skills. Today she has multiple degrees — and it all started with good developmental education.



Remediation

REDUX

By Steve Giegerich

The improbable journey began with a 3-year-old's request for a bicycle. It was a wish that demanded the girl's 28-year-old mother – destitute, unemployed and drawing welfare – do nothing less than turn her life around. Learning English was the only way that turnaround could begin.

So Lorena Corona enrolled in a night school near her home in Fontana, Calif. A native of Sacramento who was educated in Mexico before relocating to Southern California as a young adult, Corona took an entrance exam that indicated her English comprehension and speech skills stood at zero.

"Great," Corona remembers thinking. "At least I know where I am."

Eight months later, still at rock bottom, the frustrated single mother dropped out to search for an alternative

to a school that had taught her almost nothing. As part of that search, Corona boarded a local bus bound for Chaffey College in Rancho Cucamonga, 45 miles east of Los Angeles. The bus pulled onto campus. Corona, terrified, stayed aboard, choosing instead to circle back to the house she shared with her parents and daughter, Cindy. A second trip to Chaffey ended the same way.

The third time, Cindy joined her. Together, they climbed off the bus. After timidly asking for directions to the admissions office, Corona finally sat in front of a counselor, who handed her a biographical form to fill out.

For her short-term goal, Corona wrote: "I want to learn English." Under long-

term objective she explained why: "I want to work at McDonalds."

As it happened, Lorena Corona's arrival at Chaffey that day in 2000 was timely. In fact, it occurred just as the college was making a major shift in the way it viewed the hundreds of students who, like Corona, lacked the basic preparation to succeed in higher education.

Some of the 18,000 students flocking to the college from its heavily Latino service area had poor or nonex-

istent English skills. Many of those who *did* have a grasp of the language still lagged far behind in reading and writing skills. The proficiency of incoming Chaffey students in general math comprehension, particularly algebra, was even worse.

Not long ago, many two- and four-year institutions would have treated these so-called "remedial" students as an afterthought. After cashing the tuition checks, schools tended to push sub-par freshmen through a handful of developmental courses that often siphoned them out before they could advance to college-level work. By the end of the academic year, if not before, hundreds of at-risk students had vanished from campus.

Then, as now, the outcome for dropouts was predictable.

"If they leave, they usually don't come back," says Martin Golson, who oversees the developmental education program at Tennessee's Austin Peay State University. "Their dream is gone."

Recalling the eras when developmental-ed students were shunted aside and almost forgotten, Golson's boss, Austin Peay President Timothy Hall, summons a scene from *The Paper Chase*, a 1973 movie depicting the first year of law school. In it, a supercilious professor instructs his students to study the faces of classmates seated to the left and to the right. By the end of the year, the professor warns, a good number of those faces will have long disappeared.

"And if you've seen the movie, you'll remember that he says it with a certain amount of glee." Hall points out. "Well, nobody says that anymore. We used to think learning was the students' responsibility and that our responsibility was to just lay it out there. What we've discovered is that we had to adjust our responsibility."

At Chaffey, the adjustment sprang from brutally honest introspection. "What we saw," says Laura Hope, interim dean in Chaffey's School of Instructional Support, "were students in our classrooms who, despite our best efforts, continued to fail. It forced us to change our philosophy; it forced us to look at the way we do business in a different way. We didn't need to change the students, we needed to change *us*."

The wake-up call sounded at Chaffey almost a decade ago. And it has sounded over the past few years at countless



"We didn't need to change the students," recalls Laura Hope, interim dean of instructional support at Chaffey College. "We needed to change us."

Quick facts about developmental ed

- At community colleges, 45 percent of developmental education students are under 24 years old, 24 percent are between the ages of 25 and 34, and 17 percent are older than 35.
- Among students taking developmental classes, more than 80 percent are U.S. citizens, one in five is married, roughly 40 percent receive some type of financial aid, one in 10 is a military veteran, and one-third work at least 35 hours per week.
- Remediation costs may seem high, but they constitute only about 1 percent of the nation's total higher education budget – about \$1 billion out of a total budget of approximately \$115 billion.
- Each year, more than half a million college students complete developmental courses.
- After remediation, students do as well in standard college courses as those who begin fully prepared. While only one in six dev-ed students eventually earns a bachelor's degree, one-third earn an occupational associate's degree or certificate. Others go directly into the workforce.
- A large percentage of students who fail to complete their developmental coursework – as high as 85 percent in a 2007 Florida study – leave college within two years.

Source: *The Education Commission of the States*



Brian Guerra, a student tutor at Chaffey, is a fixture at the college's tutoring center. "I'm here six days a week," he says. "I'd come Sunday, too, but it's closed."

other colleges. They have responded to a moral imperative to work more aggressively to assist students who come to college with the desire to succeed but lack the ability to persevere. Developmental programs, once marginalized and often ignored, have been moved off the back shelf.

"To some degree, we're rethinking the way college works," says Pamela Burdman, a program officer and analyst with the William and Flora Hewlett Foundation. "It's not just about putting students in a class where they can succeed. ...What we are doing is taking good ideas (about how to teach foundational skills) and pushing them deeper into college."

This "rethinking" process is being driven by necessity – and by some sobering national statistics about the prevalence and efficacy of developmental courses on today's campuses. For instance, according to a 1995 study by the National Council of Education Statistics, remediation classes are offered in 95 percent of community colleges and 78 percent of the nation's four-year institutions. Thirty percent of all incoming freshmen – and 41 percent of first-year students at community colleges – enroll in at least one developmental course. (See "Quick facts" box for additional details.)

The first reaction to these facts is often to condemn public schools for failing to properly prepare their students – particularly those who attend K-12 systems in poor or urban areas. Certainly, more must be done at the K-12 level, but experts insist that even filling that tall order won't be enough, and that no one-size-fits-all approach will work. After all, they point out, nearly 41 percent of those who require dev-ed in the nation's community colleges are over age 25. Many are working adults who are returning to college after years away from the classroom, years during which their academic skills have atrophied.

More and better research on developmental education is being done, and the lessons from that research are drawing increased attention from the higher education community. As a consequence, core learning – once a patchwork of disconnected ideas, theories and programs that rarely translated from one campus to the next – is now near the center of comprehensive state education policy in some states, including Tennessee and California.

Despite the consistent efforts of organizations such as the National Association for Developmental Education, many colleges continue to take a "boutique" approach to supplemental learning. Still, the research and even a cursory review of colleges' course catalogs show that dev-ed is moving toward a unified front.

In general, the developmental-ed arena is characterized by five common trends or attributes:

- Learning communities that foster shared knowledge in small-group settings in which students take tandem courses that pair seemingly diverse subjects to aid student learning – English paired with biology, for instance, or algebra with basic writing.
- Success centers that combine personalized supplemental instruction with cutting-edge software.
- Data-driven analysis that helps colleges and universities identify student deficiencies early and address problem areas that arise over the course of their postsecondary education.
- The realization that student/peer mentoring is often the secret to success.
- A simple emphasis on improving dev-ed instruction – by providing faculty development and by hiring instructors with specific training and experience in dev-ed.

Despite recent innovations in a sector that, according to one recent study, costs public colleges and universities at least \$1 billion annually, no one assumes the heavy

lifting is done. Developmental ed, say those who study and dissect it, remains a work in progress.

Byron McClenney's first brush with what was then generally known as remedial education came 40 years ago as a young community college dean of instruction. "In 1968 I thought it would be a decade-long effort at best," says McClenney, head of the Community College Leadership Program at the University of Texas, Austin. "Boy, was I wrong."

A massive math problem

On a late summer afternoon four decades after McClenney first took up the challenge, Chaffey College freshman Ed Camerano, 44, walked into the Dan Berz Excellence Center and settled into a seat across the table from Brian Guerra, a student tutor not even half Camerano's age. Before enrolling as a college student at the beginning of the year, Camerano had last been in a classroom in 1982, his senior year in high school. For most of the 26 years since graduation, Camerano made a decent living in the vending machine business. A back injury prematurely ended that career three years earlier.

The father of two, one serving with the U.S. Army in Iraq and the other a Chaffey student himself, Camerano enrolled in the college's X-ray technician certification program. Fascinated by exotic aquatic life (his prized possession is an aquarium filled with seahorses), Camerano hopes his X-ray tech certificate will prove to be a springboard. "My real interest is maybe doing something in biology," he says.

Before anything can happen, though, Camerano must first convert the area of the earth into square megameters and decameters, a formula that had stumped him for two full hours the night before he plopped into the chair across from Brian Guerra at the Berz Center.

Camerano's first encounter with Guerra had occurred barely a week before. On the first day of the fall semester

at Chaffey, Guerra had visited several classrooms to outline the benefits of the writing lab imbedded in the main campus library and the educators and software available at the Berz Excellence Center. In his first semester, Camerano hadn't taken advantage of the comprehensive support system available to Chaffey's dev-ed students. And the number of those underprepared students is huge; more than 16,000 students – nearly 90 percent of total enrollment on Chaffey's three campuses – require at least one dev-ed class. As Guerra departed Camerano's classroom, he patted the older student on the back. "I'll see you there," he told him.

The odds for that meeting were certainly good. After all, the Berz Center – named for the administrator who spearheaded the effort that turned developmental education into an institutional priority at Chaffey – is practically Guerra's second home. "I'm here six days a week," he says. "I'd come Sunday, too, but it's closed."

At Chaffey, the push for student success begins with the data extracted from the entry exam that identifies each student's strengths and weaknesses. The evaluations launch an all-hands-on-deck effort to help students learn. The student taking full advantage of Chaffey's basic skills initiative will, by graduation, have benefited from an armada of expertise. This includes faculty, counselors, information technologists and a success center staffed by young, energetic academic support specialists and on-the-rise student mentors such as Brian Guerra. For all, the objective is to capitalize on each student's positives while assembling a detailed assessment of his or her limitations.

Chaffey's dev-ed initiatives stemmed in part from strategies honed by Extended Opportunity Programs and Services, the department that proved pivotal to the education of Lorena Corona and other non-English speaking students.

In her 10 years on the Chaffey faculty, Spanish instructor Victoria Tirado has seen programs intended for a segment of the college's enrollment expand to encompass thousands upon thousands of students. Before 1999, the year Chaffey began emphasizing basic skills, the success centers and language labs were small, and supplemental learning was generally provided, not by faculty, but by clerical staff. Tirado has no doubt that the success center assistance teams had the best interests of students at heart, but she admits they had a reputation for "sometimes answering questions incorrectly."

One difference between then and now is state-of-the-art technology in the writing lab and excellence center. Another is the professional education staff, some of whom hold the rank of assistant professor or higher.

"The culture has shifted," says Rob Rundquist, an assistant professor who serves as director of Chaffey's writing lab. "Success centers were once thought of as the end of the road, the place you went when you failed a test or didn't do well on a paper. What we've done is turned that idea around and structured our services so the success centers are, instead, a point of access."



Assistant Professor Rob Rundquist, who directs Chaffey's writing lab, says dev-ed is no longer seen as "the end of the road" for struggling students. "The culture has shifted," he insists.

Greg Creel, an associate professor and instruction specialist, believes the positive atmosphere in Chaffey's Excellence Center is a valuable commodity that can't be quantified. Creel works with students to help them find the right environment to succeed.



Tirado watches that play out every day.

"I've seen a significant increase in the completion of assignments," she says. "And the nature of the questions I get shows that our students are really learning. The questions are more sophisticated than they used to be because the basic questions are being answered (in the success center)."

The proof is more than anecdotal. According to data compiled during the 2004-05 academic year, first-year Chaffey students taking advantage of the success center showed an average gain of 11 percent on test scores when compared to freshmen who didn't use the center's staff and technology. The gap between these two student groups, 15 percent, is significantly noticeable among first-year African-American students.

Greg Creel, an associate professor and instructional specialist, says a major lesson coming out of the success center is an intangible that can't be measured by data. "It takes a lot of courage to ask for help," he points out. And as Chaffey and many other schools are learning (and as research bears out), it's easier to muster that courage in a private consultation with a fellow student than in a packed classroom.

"...Students who interact with higher-achieving students than themselves tend to improve," say the co-authors of a recent study on developmental education, Eric Bettinger, associate professor of economics at Case Western University, and Bridget Terry Long, associate professor of education and economics at Harvard University's Graduate School of Education.

The realization that he couldn't do it alone was the very thing that steered Brian Guerra to Chaffey's success

center as a freshman. And it was the counseling from the professional staff, coupled with the advice he got from a more experienced student tutor, that convinced Guerra to become a student mentor himself. An hour after Ed Camerano pulled up a chair, he and Guerra are still at it, having long since moved from decimeters and megameters to other problems in Camerano's *Introduction to Chemistry* textbook.

"What you have to keep in mind is that every problem is unique," Guerra says patiently. Camerano looks up in gratitude, and then explains the process to a visitor. "He's rationalizing all this for me, separating it, breaking it down. There are formulas in the book I don't know that I need to know. He's a good teacher."

Guerra smiles. He knows it. In fact, he's thinking of changing his major from business to education.

Guerra's success is bolstered by a support mechanism Chaffey calls "instructional specialists" and "instructional assistants," a dedicated team whose members "don't feel as if we're doing developmental ed at all," says Rob Rundquist.

What they're doing, he and the other instructional specialists and assistants insist, is teaching – not just teaching, Laura Hope points out, but "sophisticated teaching." That means, in addition to keeping up with the needs of students who come to the success centers, the support staff also serve as an extension of the college's classrooms. The information that flows between Chaffey's instructional staff and the success center team is a constant stream of lesson plans, consultations on books and software and, when necessary, a heads-up about the needs of individual students.



Ed Camerano, 44, early in his second semester at Chaffey, takes advantage of the university's student-support system to get some math help from tutor Brian Guerra.



Spanish instructor Victoria Tirado (right) works with instructional specialist Cindy Walker to fine-tune lessons for her students. Tirado says Chaffey College's emphasis on developmental education has improved students' performance.

Giving credit where it's due

In a parallel universe 3,000 miles from Rancho Cucamonga, a supplemental learning program at Valencia Community College in Orlando, Fla., mimics what is unfolding across the country – though with a few significant twists.

Another leader in dev-ed reform, Valencia has transformed office and library spaces into learning centers which, in some cases, are 8,000 square feet or larger. The school also follows the trend of using data aggressively to identify and track student performance. And it actively pairs instructors in learning communities that weave study and career skills into the academic curriculum.

In one departure from the norm, successful developmental-ed students depart Valencia with a grade that shows up on their transcript. By conferring academic credit for supplemental math and language courses, the school removes some of the stigma of dev-ed while sending a message that it cares for students' financial well-being. (A 2008 study estimates that students spend an average of \$504 annually to enroll in developmental-ed programs in Florida's community colleges. The credits won't transfer to another college or university, but they do count at Valencia – and that's a departure from the approach at most colleges, which ask at-risk students to persevere in courses that will never appear on their college transcripts.)

In 2005, Valencia introduced another component of its supplemental instruction program that sets it apart and defines the college's mission: It identified a cadre of students to serve as Supplemental Learning Leaders.

David Hosman, a success coach who arrived at Valencia in 1971, when the college's enrollment was a mere 3,000 students (today, Valencia enrolls 42,000, plus 14,000 continuing-education students), calls the SL Leaders the final piece to an intricate puzzle the college has worked long and hard to solve.

"We kept doing different things, and nothing worked," Hosman recalls. "This has been more intentional, getting students to work with groups, with the faculty, with the SL Leaders and with tutors."

Math instructor Ryan Kasha says the addition of the student leaders into structured learning is the fulcrum that balances the rest of the equation. "I view it as a triangle," says Kasha. "It's not instructors first, SL Leaders second and students third. It's a team. The SL Leaders work with the instructor, the instructor works with the SL Leaders, and together they work with the students. All three groups are working toward the same goal – learning."

Watching them at work, it's sometimes difficult to remember that the SL Leaders are, first and foremost, students – students who fit a certain niche.

"We don't necessarily look at 'A' students; we also look at solid 'B' students with good conversational skills in a group," says Julie Phelps, Valencia's Achieving the Dream coordinator (see story on Page 11). In her role, Phelps oversees many of the programs aimed at the thousands of entering students (75 percent of the total) who lack basic skills in math and language arts.

Shannon Cook certainly fit that description. When she came to Valencia last spring after four years in the military, Cook helped make up the two-thirds of the college's student body who required math remediation.



Supplemental Learning Leader Shannon Cook (standing) works on algebraic formulas with Valencia Community College student Lorry Jacques. Cook and other SL Leaders break down the walls that prevent some students from seeking help.

"All that stuff sort of got wiped out when I was in the Navy," she explains. And yet, two weeks into a beginning algebra class, Cook realized: "I have a gift, I could figure it out." Cook drew the attention of the faculty, and, prior to the start of the fall semester, she entered the college's SL Leader training program.

Valencia's SL Leaders differ from conventional peer tutors in several ways, but probably the most important is that each is assigned to a classroom teacher. "Because the SL Leader is in every class, she sees what I'm writing on the board," says Kasha. "She hears what I'm telling the class. She takes notes. She takes all the tests. There's no second-guessing about what I did in class because she's always here. Don't get me wrong: The tutors do an excellent job. But they can't enforce the skills. They can help the students, but not in the same way as someone who is part of my class."

Cook gives students her cell phone number and works to break down the wall that sometimes separates students from instructors. "It's more of a personal interaction," she notes. "They know my name. They see my face in class. They know I'm doing all the things they're doing. I'm there with them, and, if they have a personal problem, I'm right there."

With the first exam in introductory algebra behind her, nursing major Lorry Jacques was already looking ahead to the next test when she arranged to meet with Cook in an office annex off the main learning center on Valencia's West Campus. From her observations of Jacques' algebra class, Cook knew which direction to point the student. She began with a white board presentation detailing the difference between standard and scientific notations. Although another student was present, Jacques was, for all

practical purposes, the beneficiary of a private tutorial. After a few questions, Cook directed Jacques to the white board, saying: "Now you're ready to put in your integral notation." She then nudged Jacques through a formula using derivatives. It took Jacques three attempts, but she finally got it right.

"I wasn't trying to put you on the spot," Cook said as the relieved Jacques took her seat. "But I know you know these answers. I'm just trying to pull them from the back of your brain."

To Cook, the exposure to the students and their course work in class opens a door that is normally closed. "Sometimes, students are just afraid to ask questions," she points out. "And sometimes, when professors are teaching a lot of classes, it may seem like they may not want to answer them anyway. Here, it's OK to ask, to slow it down."

From lawns to logarithms

Three years ago, James Billingsley was sitting in Lorry Jacques' spot, and it had taken him a long time to get there.

Billingsley first appeared on the Valencia campus in 1997, the year he graduated from high school. After one semester, he was gone, promising to return in the fall. But the success of his landscaping company persuaded him to break that pledge, and his one-semester break "turned into four years." In 2001, Billingsley returned to Valencia, again dropping out after one semester. "And *that* turned into four years," he recalls.

One day in 2005, dreading the prospect of mowing even one more lawn, Billingsley called a friend who had expressed an interest in taking over the business. When the two men met that night, Billingsley unhooked the

equipment trailer from his truck and attached it to the hitch on his friend's pickup.

"The next day I registered," said Billingsley.

His admissions exam (like Chaffey, Valencia insists on data-driven assessment) placed Billingsley into intermediate algebra, but it took less than an hour for him to learn he was in the wrong place. Asked about an integer (an assigned number), Billingsley replied: "An integer?" Twenty-four hours later, he was reassigned to beginning algebra.

It was the first year for SL Leaders on Valencia's campuses, and Billingsley encountered his first one when he got back into intermediate algebra his second semester. He attended one study session, then another and another. If Billingsley struggled with a certain section of the book, the SL Leader knew immediately where to look. If Billingsley performed poorly on a quiz, the SL Leader redirected his focus to the problem area. If Billingsley grappled with a problem presented in a lecture, the SL Leader – who'd sat through it himself – suggested where Billingsley might find the material in his notes.

"He was literally on the same page," Billingsley recalls.

By the end of that semester, Billingsley figures he attended 65 SL Leader study sessions (some conducted by a friend, an SL Leader assigned to another instructor). When classes resumed, he was part of the SL Leader team. "And I got paid!" Billingsley said, still somewhat astounded that Valencia attaches an hourly rate of \$10.28 to a job he loves.

Since then, Billingsley has served as an SL Leader six times, mostly in beginning algebra. Because of his classroom performance (he's on the "President's List" for academic excellence) and his abilities as a mentor in supplemental learning study sessions, Valencia officials recommended him for a prestigious internship at the Orlando headquarters of an international conglomerate.



After being helped by Valencia's SL Leaders, James Billingsley became one himself. Now he's considering a four-year degree in physics.

Dev-ed effort a central focus of Achieving the Dream

Whether by necessity or design, developmental education has always been a mainstay of the nation's community colleges. As open-access institutions, two-year colleges have long served vast numbers of students whose pre-college academic preparation – and thus their chance for college success – is limited by societal and economic factors.

It stands to reason, then, that the most prominent national effort to improve success rates among community college students would put dev-ed high on its list of priorities and strategies – and that is certainly the case with Achieving the Dream: Community Colleges Count.

Achieving the Dream, launched in 2004 with major funding from Lumina Foundation for Education, is a national initiative that works to help more community college students succeed, particularly students of color and low-income students. The initiative, co-created and jointly implemented by a partnership of seven national organizations, has attracted more than \$100 million in funding – about half from Lumina, the rest from more than a dozen foundations and other entities in the 15 states where the initiative is now active.

Achieving the Dream emphasizes the use of research to drive change at the colleges. With help from the initiative's coaches and research experts, campus leaders collect and analyze data to identify gaps in student achievement. Subsequently, they implement strategies to close those gaps.

Not surprisingly, a major strategy has been a renewed and intensive focus on developmental education. In fact, dev-ed projects are under way at all but three of Achieving the Dream's 82 participating colleges.

"There's really no way to increase student success broadly and significantly without focusing on developmental education," says Carol Lincoln, a senior program director at MDC Inc., the North Carolina nonprofit organization that serves as Achieving the Dream's managing partner. "Getting students some effective, early help is crucial," Lincoln adds. "The colleges we work with – and the leaders of those colleges – they get that. That's why they're working hard to make sure their programs are effective."

In addition to fostering positive change at the colleges through developmental education projects and other on-campus efforts, Achieving the Dream works to improve the environment in which community colleges operate. Through the use of community dialogues and efforts to engage state and local leaders, Achieving the Dream seeks to highlight the importance of two-year institutions and create strong partnerships that support these colleges and the students they serve.

For more about Achieving the Dream, visit www.achievingthedream.org.

**ACHIEVING
THE DREAM™**
COMMUNITY
COLLEGES
COUNT

"I went from mowing lawns to a high-paying job at Siemens (AG)," said Billingsley. He says his next step will be to transfer to the nearby University of Central Florida, where he is considering a degree in theoretical physics. Billingsley says his pay as an SL Leader seems almost inconsequential now. "What I learned from SL is better than money," he insists. "The money goes away; the things I've learned I can keep forever."

When James Billingsley wandered into his first supplemental learning session three years ago, he was taking advantage of a movement quietly spreading through two- and four-year institutions across the country. And while developmental education is now appearing on the radar screens of researchers and practitioners, American educators have struggled for decades to find the best ways to address the learning needs of underprepared students.

"Developmental ed is as old and American as apple pie," says John Gardner, executive director of the Policy Center on the First Year of College in Brevard, N.C. In fact, Gardner traces the movement to the enactment of the Morrill Act. Signed by Abraham Lincoln in 1862, it opened the door to primarily agricultural colleges for thousands of rural youth across the country.

If extending a helping hand to underprepared students is an American tradition, it is one that had long occupied a low rung on the higher education ladder. Some say semantics are partly to blame for the status problem. Once Chaffey made under-performing students its core mission, the word "remedial" disappeared from the course catalog. Since then, Chaffey's developmental classes are called "foundation" courses.

"Remedial' courses have a stigma," acknowledges Harvard researcher Bridget Terry Long, who noticed this naming effect when examining dev-ed programs in Ohio. "They can say to students, 'Look, you don't

belong here (in college).' Sometimes, it's just the way the courses are labeled."

In a way, supplemental learning has moved from being higher education's marginalized stepchild to what Chaffey College President Henry Shannon calls "the heart of what we do."

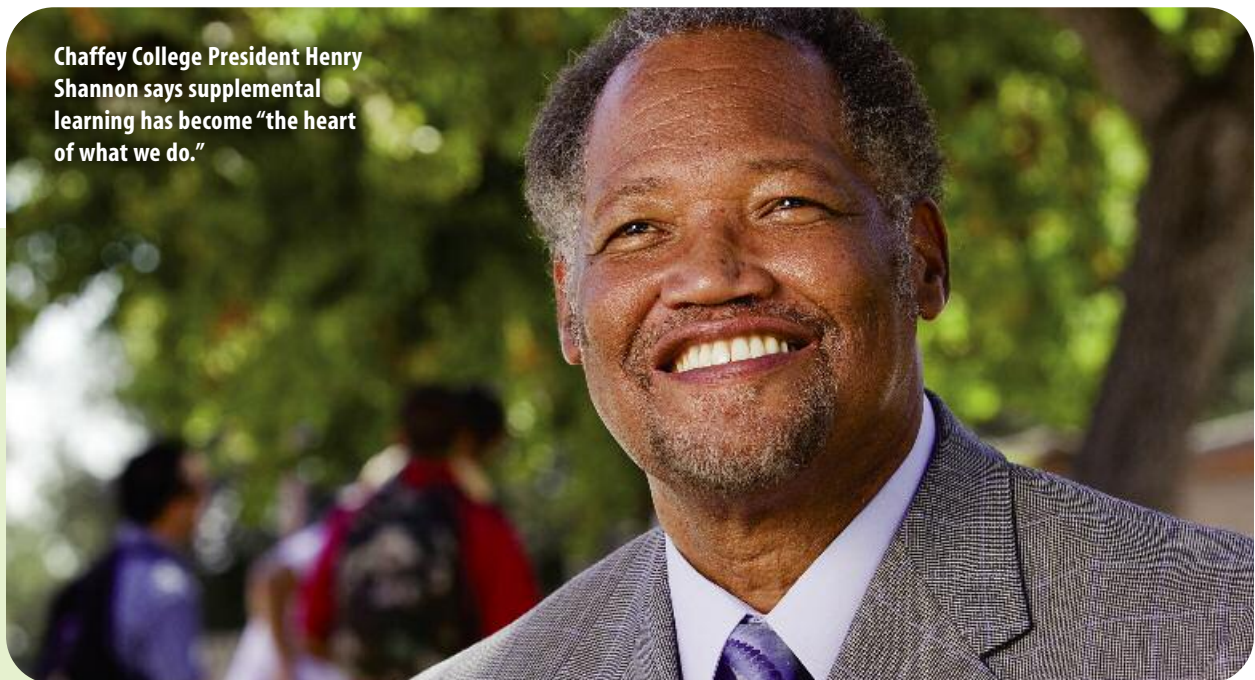
Citing the financial circumstances of the vast majority of core learners, Gardner argues there is still a long way to go. "The tragedy ... is that many of these students are borrowing money just to be there," Gardner says. "If they don't get out of developmental ed, how are they going to pay for it? They've racked up a lot of debt for little or nothing."

Motivated by the need to address developmental education from both an institutional and student perspective, California convened a panel of community college educators in 2004 to take a comprehensive look at the status of dev-ed programs offered to the 2.5 million students attending two-year colleges across the state. What the group found was "100 community colleges and 110 approaches" to teaching supplemental learning, according to Robert Johnstone, dean of planning, research and institutional effectiveness at Skyline College in the San Mateo Community College District and part of the research team.

No longer.

Drawing a good deal from the Chaffey programs, the study – *Basic Skills as a Foundation for Student Success in California Community Colleges* – has placed dev-ed squarely in the arena of statewide education policy. Since 2006, California's Basic Skills Initiative (see story on Page 14) has provided the state's 110 community colleges with the framework to align data, expertise on programs and courses that best foster developmental learning, and other resources.

Chaffey College President Henry Shannon says supplemental learning has become "the heart of what we do."





Valencia Community College math tutor Oscar Cartaya uses visual clues to help a student in the expansive math center on the Orlando college's west campus.

California initiative offers 10 tips for better dev-ed

Not all developmental education programs are created equal – and, of course, not even the best program can guarantee success for all students. Still, institutions and instructors have learned what’s working in hundreds of classrooms for tens of thousands of students. For example, research conducted for the California Community Colleges system as part of its Basic Skills Initiative (BSI) has linked the following instructional practices with success for developmental learners:

1. Sound principles of learning theory are applied in the design and delivery of courses in the developmental program.
2. Curricula and practices that have proven to be effective within specific disciplines are employed.
3. The program addresses holistic development of all aspects of the student; students’ social and emotional development is considered along with their cognitive growth.
4. Culturally Responsive Teaching theory and practices are applied in all aspects of the program.
5. A high degree of structure is provided in dev-ed courses.
6. Developmental-education faculty members employ a variety of instructional methods to accommodate student diversity.
7. Programs align entry/exit skills among levels and link course content to college-level performance requirements.
8. Dev-ed faculty members routinely share their instructional strategies.
9. Faculty and advisers closely monitor student performance.
10. Programs provide comprehensive academic support mechanisms, including the use of trained tutors.

And these tips are just the beginning. To help ensure that a college’s dev-ed program is all it should be, BSI researchers have compiled a detailed list of guidelines in each of three other critical areas that institutions must consider when building their programs:

- Organizational and administrative practices (including faculty recruitment and integrated student-support services).
- Specific program components (such as mandatory orientation and robust counseling).
- Staff development (including its connection to faculty reward structures).

For the full list of guidelines in each of these areas, and for more information about California’s Basic Skills Initiative, visit www.cccbsi.org.



Community colleges are certainly a logical place for policymakers to start when seeking to improve dev-ed, but experts insist that the effort can’t stop with two-year colleges. Remember, the National Center for Education Statistics estimates that 78 percent of the nation’s four-year institutions offer remediation classes as well.

In early 2007 – after five years of debate, trial and error over how to best emphasize core learning in the state’s higher education institutions – the Tennessee Board of Regents directed all of the state’s two- and four-year colleges and universities to realign developmental education by the end of the year.

The state got no argument from Austin Peay State University.

“It’s economics-driven; it’s success-driven,” says Martin Golson, an instructional specialist at Austin Peay’s main campus in Clarksville, 45 minutes north of Nashville. “When you have students coming in and not graduating, the state gets concerned.”

Austin Peay, it turned out, was ahead of the curve. Its Structural Learning Assistance (SLA) program, tweaked and perfected for five years, was ready for a trial run during the 2007 summer term. When its students arrived for the 2007-08 academic year, the program was ready to launch. “Before, the focus was on what the students did not learn and, as a result, it did not correspond with what lies ahead,” Golson recalls. “Now it’s all pointed toward the core, what they need for their future – not just here, but after they leave here as well.”



Austin Peay State University President Timothy Hall oversees an institution in which dev-ed has become a campus-wide priority.

Half of Austin Peay's 9,000 students are the first in their families to attend college, and 15 percent are resuming their education during or following military service (Austin Peay operates a branch on nearby Fort Campbell Army base). An estimated 43 percent of students come to campus requiring developmental math. Given those realities, Austin Peay had little choice but to meet the challenge.

Again with slight alterations, many of the pieces found at Valencia and Chaffey are also evident at Austin Peay: a success center staffed by professional educators and student aides, mandatory supplemental learning workshops, student "leaders" serving in the role of mentors, data-driven evaluation and follow-through, and extensive interaction between faculty and the supplemental learning staff. SLA has also adopted, in some core math classes, a strategy that closely resembles a learning community.

Making math add up

And that's what caught Delancia Davis by surprise at the start of the term in August. "When we got the syllabus, I saw *Is Democracy Fair? – The Mathematics of Politics*, and I thought: 'This is math?'" In a system where no subject exists in a vacuum, it indeed *was* math, though presented in a form totally different from the bland recitation that had been the norm for Davis, a communications major. Classmate Brittaney Scott had had similar experiences with math instruction and, as a journalism major, even wondered why math mattered to her future. After all, Scott says, tongue partly in cheek: "There's no adding or subtracting when you're writing a story." Rather than recite age-old bromides about the importance of a well-rounded education, Austin Peay set out to demonstrate how math and algebra do relate to the real world.

"It's math presented in a way that is more practical, with more concrete examples," says sophomore and SLA Leader Christian Pierce. "And that's how you learn, by example."

Scott reaches into her math folder to retrieve an early-semester assignment, "Mathematics of politics." The project required Scott and Davis to research Costa Rican governance, determining first if the Central American nation is parliamentary, a democratic republic or governed by another structure. The questions tapped their verbal skills: "How are the ballots tabulated? Plurality? Standard run-off? Sequential run-off?" And the responses were grounded entirely in mathematics. "It shows us how much math is used in politics," says Davis.

To Golson, a 23-year Army veteran, that response is the academic equivalent of mission accomplished. "They think math is just something you do in a classroom," he says. "What we try to do in SLA is relate it to real life."

As the students in structured learning leader Michael Gundrum's math workshop discovered, there are times at Austin Peay when even a classroom can't confine classroom math. At Austin Peay, the assessment test



Martin Golson, instructional specialist and director of the academic success center at Austin Peay, says his instructors work to "relate (math) to real life."

flags the math and language arts deficiencies of every student arriving on campus with an ACT score of 19 or below. For students testing below average in basic math, the competencies are broken into six categories:

- Fractions and decimals.
- Number and measure.
- Proportional reasoning.
- Signed numbers and algebraic expression.
- Linear equations and their graphs.
- Radicals and roots.

When students fall short on one or more benchmarks, the SLA mechanism kicks in to bring them up to speed.

In a recent session of Michael Gundrum's mandatory supplemental math workshop, the concept of proportional reasoning had tripped up a dozen students, landing them all in a corridor outside a first-floor computer lab in the Academic Support Center. As Gundrum ushered the classmates into the corridor, he glanced over his shoulder. A veteran of the Iraq war and a senior majoring in history with a minor in education, the 29-year-old Gundrum didn't become an SLA Leader without prior teaching experience. Still, he admits that training young soldiers in CPR and basic anatomy on military installations made discipline fairly simple. "They had to listen," he says. "Otherwise I'd make them drop and do push-ups."

He soon discovered that first-year students at a comprehensive university were a different story – especially

**Austin Peay
freshmen Delancia
Davis (left) and
Brittaney Scott
have a new appre-
ciation for math,
thanks to their
dev-ed experience.**



in a computer lab, where the trick is to keep everyone focused on highly specialized math software rather than a MySpace page. Taking a cue from Austin Peay President Timothy Hall, Gundrum now appreciates that developmental education comes down to all parties taking responsibility – students and the university alike. Given that, Gundrum trusted students left in the computer lab to do the right thing – by using specialized software to address their deficiencies – while their classmates met in the hallway to bone up on proportional reasoning.

"It's a juggling act," Gundrum acknowledges. "You need to keep them busy. But we're in the fourth week now, and they're in control. It's up to them to get the work done."

The students in the corridor divided into two-person teams, and each pair lined up at the foot of an elongated ruler taped to the floor. From there, they paced off – counting aloud – the number of steps required to walk a prescribed distance. The numbers were then entered on a chart. Returning to the lab, the students translated the figures, *proportionately*, from the chart onto a graph.

To freshman George Edwards, the exercise was an effective and totally unexpected way of learning. "I was worried about college and the whole college experience," he said. "I didn't know if I'd like the large classes; I thought I'd be sitting in the back of a room listening to a lecture, taking notes. I thought I'd be a number, but this (SLA) makes you feel like you're part of the class. You're not a number here."

Dalencia Davis agrees. "I know I don't have to go through (math) myself," she said. "I know there's always going to be someone there to help. That makes my college life that much easier. I know, with my deficiency in math, I'll always have someone to go to."

At Austin Peay, that "someone" is typically one of the university's ubiquitous SLA Leaders. For \$12 an hour (the best-paying job on campus, Gundrum says), these student-success aides are required to attend supplementary workshops and be available for one-on-one mentoring – all while meeting the requirements of their own academic programs. Perhaps that's why they seem to be everywhere at once.

Almost as important as Austin Peay's student-support system is the way the college and the state have together moved dev-ed into the mainstream. No longer is supplemental learning the elephant lurking in a corner of the campus. For Davis, developmental math is a class that, once completed, will earn her credit toward her bachelor's degree. Like Valencia, Austin Peay has made developmental education courses credit bearing. "It's not labeled 'remedial,' and that means it won't follow us for the rest of our college careers," says Davis. "(If the students get the work done) then we remove the deficiency at the end of this semester."

Last year, the first academic year with SLA fully implemented, a significant number of Austin Peay freshmen worked away their deficiencies. The proof is evident in a 2008 retention rate that jumped 10 percentage points from 2007. "What that means," Golson says, "is 97 students who might have left school returned this year." Golson enrolled in Austin Peay straight out of the Army in 2004 to pursue a second career as a high school math teacher, a goal soon superseded by his appreciation of data-driven learning. High school lost a teacher, but Austin Peay gained a success center coordinator with boundless enthusiasm for the work and for his students.



Structured Learning Assistant Michael Gundrum leads Austin Peay students in a hallway exercise in proportional reasoning during a mandatory supplemental workshop held immediately after their math class.

A growing passion

Martin Golson's fervor for developmental education isn't unique to Clarksville – or, for that matter, to Rancho Cucamonga or Orlando. In the view of Gilles Malnarich, co-director of the Washington Center for Improving the Quality of Undergraduate Education, based at The Evergreen State College in Olympia, Wash., core learning is a magnet that pulls the “truly passionate” into college classrooms.

“You have to believe that ordinary people matter,” said Malnarich, a researcher and leading advocate of learning communities. “When I talk to people who do this work, I find they are the type of people who believe public education is the great equalizer. They believe that being academically unprepared has little to do with a student's real abilities and more to do with the unevenness of (their social and economic upbringing). They are the kind of people who believe most anyone can be an able learner.”

Few, arguably, have a more profound reason to believe than Ryan Kasha at Valencia. Kasha begins each semester with an almost identical message to the students gathered in his beginning algebra classes.

“You're not dumb, and you're not stupid,” Kasha tells them. “Think of learning as a house. You're here because there is some sort of gap in your foundation. I'm here to help you fill that gap so we can build the rest of the house.” As he speaks, Kasha is well aware that, in all probability, his misaligned eyes, and not his words, are drawing the attention of students seeing him

for the first time. The condition is called “double elevator palsy ptosis of the right eyelid,” an outcome of a botched forceps delivery 29 years ago (he nonetheless has 20-20 vision). The severity of the other forceps damage, to his jaw, left Kasha afraid to speak until age 5.

One of the parade of specialists consulted during his formative years determined Kasha had an IQ of 43. Kasha's parents were told their son was destined for remedial primary and secondary education. With a few breaks, the specialists predicted, Kasha might one day support himself with a job in the fast-food industry.

“That, essentially, was the message they gave my parents,” recalls Kasha. “I was classified a dead duck.” He smiles and adds: “They didn't buy it.”

Kasha's parents enrolled him in a Head Start program as the first step toward proving the specialists wrong. He didn't excel, but he did well enough to move on to kindergarten – which he wound up repeating. After that, the school system assigned Kasha to a specialized first-grade classroom. By the second grade, he was complaining to his parents that the specialized work was “too easy.” In third grade he was mainstreamed. It took Ryan Kasha three years to graduate from high school and three years to earn a bachelor's degree, magna cum laude, from Florida Atlantic University – the institution that later awarded him one master's degree in education and another in psychology. He arrived at Valencia five years ago, the third stop – including employment at one other community college – after starting his teaching career at the high school level.



Valencia Community College instructor Ryan Kasha overcame his own obstacles to achieve college success. Now he takes a positive, common-sense approach in helping his math-challenged students.



Jeannette Tyson leans in to assist algebra students Jaqueline Fezell and Warren Levy in a developmental mathematics course at Valencia Community College.

Kasha's algebra classes are a burst of nonstop energy, an amalgamation of teaching, bad puns, even worse jokes, many casting his favorite candy, M&Ms, in the role of a learning tool. It's math improbably cast as entertainment. In teaching the concept of the common denominator, for example, Kasha asks the class to think of plain M&Ms as whole numbers and peanut M&Ms as negative numbers. The common denominator? Both are a chocolate-coated hard shell candy. Using the white board, he translates M&Ms into formulaic digits. Some students find it hilarious; others puzzling. But all are transfixed. What's important to Kasha: As soon as they return to their own worksheets, it's clear that they get it. The common denominator, a mystery to many just moments before, is something they suddenly comprehend.

"There is some challenge to presenting these ideas to students," Kasha admits. "But the fun is finding a creative way to teach the concepts and then watch them as they begin to understand." From his vantage point at the front of the classroom, Kasha looks out on much more than a handful of math-challenged students laughing and learning. "I know what it's like to be at a disadvantage," he says. "I know what it's like to reach a goal. When I look out there, I see myself. At one point of my life, that was me. So there's a lot of joy when I see them succeed."

A drive to succeed

Ryan Kasha never punched a time clock at McDonald's. Neither, for that matter, did Lorena Corona. The task of filling out Chaffey's admissions and financial aid forms completed, her transition from welfare mother to full-fledged college student began that day eight years ago. Spurred by the brief and unproductive foray at night school, this time she approached learning with unwavering resolve. It was clear, even as she stumbled through the initial English as a Second Language (ESL) classes, that Corona had something different.

Chris Flores, coordinator of the financial aid and scholastic support center for Chaffey's Latino students, says Corona was like "Swiss cheese. There were a lot of holes in the learning, but she was bold. She wasn't afraid to ask questions. She'd say, 'What is this? I don't understand.'"

Slowly, befuddlement turned to comprehension and, with that, a confidence that grew with Corona's grasp of English. Not coincidentally, as Corona was maturing academically, Chaffey was growing as an institution. It was the time, the plain-spoken Flores recalls, when college officials stopped "bull- ----ing ourselves that we're Harvard on the Hill." Pausing, she adds: "We're not. The bottom line is that our students need something else. We had to come to that conclusion, and we did."

We came to the realization that students like Lorena are *our* students."

When gaps in Corona's learning popped up, the various tools in Chaffey's expanding basic-skills toolbox – counseling, student mentoring, individualized learning and analysis of her classroom performance – came into play. The success center (predating the construction of the Don Berz Excellence Center) became Corona's turf. "It was key," she says. "I was a nontraditional student, and I had no place to study at home. I practically lived there."

The more Corona learned, the more emboldened she became. In the campus cafeteria – a room she had departed hungry more than once rather than risk the embarrassment of mispronouncing "hamburger" while ordering lunch – Corona made an ever-expanding circle of friends. Her curiosity about the way things get done helped her win a spot in student government. And when she and the president of the Associated Students of Chaffey College clashed over policy, Corona ran for his seat. She conducted a grassroots campaign that had her wooing voters with lollipops and hand-drawn platform pamphlets (because she didn't have access to a computer or printer at home). Corona won.

By 2004, Corona had a 3.8 grade-point average and had enough academic credits to earn three associate's degrees. She was, by all outward measures, a success in the classroom, on campus and in her part-time, off-campus job at a local probation office. Inwardly, though, a significant part of Corona still played the role of that scared young mother, terrified at launching the education that could change her life. She even passed up the opportunity to transfer to a four-year institution in order to re-enroll at Chaffey for the 2004-05 school year.

Corona may have temporarily rejected the world beyond Rancho Cucamonga, but that world was taking notice of her, partly because she was nominated for a statewide academic achievement award. As she neared the completion of the course work that would net her two more associate's degrees, some high-powered inquiries and offers started to filter in. Stanford University encouraged Corona to apply, as did the University of California-Berkeley. Southern Cal, long the first choice of Corona and her family, dangled the possibility of a full scholarship. Then, in May 2005, a letter postmarked "Cambridge, Mass" arrived. Corona dutifully read the recruitment letter from Harvard University and, convinced it had to be some sort of

oversight if not an outright mistake, tossed it in the back seat of her car.

"I couldn't believe it," she remembered thinking. "Harvard? Are you sure?"

Summoning her courage, she called Harvard to find out. There'd been no mistake. The Division of Continuing Education wanted Corona to apply. Corona and an admissions officer spent a fair amount of time discussing curriculum, financial aid and housing. Corona told no one about the letter or the call. Following her second commencement ceremony in as many years, Corona and her family gathered at a nearby Applebee's to celebrate. Corona's daughter Cindy, then 8, was there, as were her parents, Manuel and Berta Corona. All assumed the honored guest was bound for the University of Southern California.

The graduate cleared her throat and informed her family of an unexpected development. She produced the letter from Harvard. Her mother cried; Manuel Corona turned silent, mulling his thoughts carefully. After what seemed an eternity, he spoke to his daughter.

You have a "civic responsibility," he said. "It's not about you. It's about the people behind you."

Berta gently asked Lorena what she was going to do. "I'm going to Harvard," her daughter replied fearlessly.

An ivy-covered epilogue

In the first week of September 2008, Lorena Corona, now 36, visited home. Her first act was to present her father with a diploma bearing the Harvard seal. Dated June 5, 2008, the diploma proclaims that Lorena Corona – the first in her family to go to college, a once-terrified single mother and dev-ed student – has met the requirements for a Bachelor of Liberal Arts in Extension Studies, cum laude. The diploma now hangs in Manuel Corona's living room.

Before leaving Cambridge, Lorena Corona had purchased a replica of the diploma and had it framed with singular purpose and thought. After delivering the original to Manuel, she completed her improbable journey by heading back to Chaffey College. There, without fanfare, she presented it to "the people that taught me how to dream, how to hope, how to achieve success."

Lorena Corona is now back at Harvard, working on a master's degree in management. But, just days before

When gaps in Corona's learning popped up, the various tools in Chaffey's expanding basic-skills toolbox – counseling, student mentoring, individualized learning and analysis of her classroom performance – came into play.



Lorena Corona poses with Concepcion de Dobay, a maintenance attendant at Chaffey and her former ESL classmate at the California college. Corona is holding her framed bachelor's degree ... from Harvard.

that return trip to Cambridge, she was back on the Chaffey campus, posing for a photo in front of the Don Berz Excellence Center, famed diploma in hand. The scene caught the attention of Concepcion de Dobay, a campus maintenance worker who has been a friend to Corona since the very early days, when they were classmates in an ESL class.

"You did it! You did it!" de Dobay squealed, pumping her fist in the air. "No, no," Corona corrected. "We did it. *We*."

Just then, as if on cue, instructional assistant Sara Zamora walked out of the success center. Around the center, Zamora is known as someone who will walk through walls for her dev-ed students – the kind of person Gilles Malnarich of The Evergreen State College refers to when she describes the "truly passionate."

Corona left Chaffey before Zamora was hired. The two had never met, and Zamora had never heard Corona's story. While the photographer snapped photos

of Corona, there was time to relay an abridged version: the poverty, the inability to speak English, the three trips on the bus, McDonald's as a career objective and the five associate's degrees. Then Zamora was told about the Harvard diploma in Corona's hands.

"Let me see! Let me see!" she insisted, hurrying down a small flight of steps. Corona, startled, turned from the camera and displayed the framed document. The two strangers hugged ... and were finally introduced.

Sara Zamora stepped back, unable to keep her eyes off the document in Corona's hands. The tears started to flow.

"Oh, my God. Oh, my God," said Zamora, pointing to the diploma, "that ... that is why I am here."

Steve Giegerich, formerly an education writer for the Associated Press and a former journalism instructor at Columbia University, covers education for the St. Louis Post-Dispatch.

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Lumina Foundation for Education
P.O. Box 1806, Indianapolis, IN 46206-1806
www.luminafoundation.org

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November 2008

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