

## The Right Mix: How an L.A. School is Blending a Curriculum for Personalized Learning

BY SUSAN HEADDEN

» **Patty Berganza is a chatty 16-year-old** with a mouthful of braces, a thick mane of black hair, and a lightning fast brain. The last of these left her so bored at her previous Los Angeles high school that she racked up more than 49 unexcused absences in one year and earned a reputation as a slacker. Despite her dismal grade point average and enormous gaps in knowledge, she was continually promoted to the next grade. She never thought about college, because nobody ever talked about it. Indeed, she says of her previous high school, "I don't think my teachers even knew my name." In many ways, Patty represented countless students who graduate at abysmal rates but who have the capacity to do infinitely better. Unlike others, she found a new school that has helped her reach that capacity.

Where Patty once routinely slumped at the back of the classroom texting her friends about her disregard for her teachers and her courses, she now perches front and center, attentive and engaged. She has flown ahead of her peers in math and earned an overall grade point average of 3.28. An unofficial student ambassador, she takes the lead in discussion groups, tutors other students after school, and talks hopefully about applying to the University of California at Berkeley. That particular college preference may or may not work out, but one tends to believe Patty's teachers when they tell this effervescent teen, "you have the potential to be somebody." What is remarkable is that Patty is realizing that potential in a classroom with 48 students.

That's right—here at the Alliance Tennenbaum Family Technology High School, a charter school on L.A.'s eastside, every teacher is responsible for at least a

third more students than any sound educator would recommend. But these are no traditional classrooms. The school uses a hybrid model that combines online and traditional instruction and allows students to learn in three different ways. On this particular fall day, 16 students are getting traditional in-person instruction in Algebra I from teacher Wendy Chaves; roughly the same number are doing math problems online; and still others are gathered in clusters of four tutoring each other. No matter where they are in the rotation, they see the student-to-teacher ratio as what it effectively is—an ideal 16-to-1.

As public budgets shrink, and as technology expands to allow for remarkably individualized instruction, schools are justifiably looking toward online models for ways to improve student performance. Most states have embraced online education for one purpose or another, whether it's for remediation, credit recovery or enrichment, and the numbers are sure to grow. Yet the criticism of online learning has long been that, however cost-effective, it cannot replace the human element in teaching. And that is certainly true. The beauty of a hybrid model, also known as blended learning, is that it enhances the human element. Computers allow students to achieve competency by letting them work at their own pace. And with the software taking up chores like grading math quizzes and flagging bad grammar, teachers are freed to do what they do best—guide, engage, and inspire.

Blended learning has caught the attention of an increasing number of educators and policymakers who see it as one of the most promising means of catering to students with a wide variety of learning styles and abilities. Tennenbaum, which opened in 2011, is one of its pioneers. This June the school will graduate its first class of seniors, and only six out of 74 are unlikely to make it. (When they arrived here, only half of these students were on track to graduate.) In the months since it adopted the rotational model known as Blended Learning for Alliance School Transformation,



or BLAST, Tennenbaum has learned that adaptation to radical change does not come quickly or easily. But it is showing that with commitment and a willingness to experiment, blended learning has great potential not just for improving efficiency and reducing costs, but for boosting student achievement across the board.

## A LEAP OF FAITH

Tennenbaum, which was recently renamed to honor a big donation by the founder of a Los Angeles hedge fund, is part of Alliance College Ready Public Schools, a charter management organization with 14 high schools and six middle schools throughout Los Angeles. Its CEO is Dr. Judy Ivie Burton, a former superintendent of the Los Angeles Unified School District. The students share a sprawling concrete campus with

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four other schools in an industrial neighborhood in the shadow of famed Griffith Park. In contrast to the affluent towns on the west side of the park, only 40 percent of adults in this neighborhood graduated from high school. Ninety percent of the students at the school are Latino, 73 percent qualify for subsidized lunch, and 65 percent arrived lacking credits they would need to graduate.

Blended learning was not originally on the table when the Alliance network first considered the possibilities of technology for improving instruction. Instead, the founders had in mind offering online courses for dropouts to recover credits. But Principal Michelle Tubbs, a longtime veteran of the classroom who holds

a doctorate in education technology, had conducted a pilot program with blended learning at an Alliance school in the city's Watts neighborhood, where the average freshman read and did math at the fourth-grade level. Her team there had aggressively used data to shape instruction and by the end of the year, students were performing on average at an eighth-grade level. It was still not optimal, but it was a big jump from far behind. "We knew we were onto something pretty powerful," said Tubbs. Later, she dove into the deep end at Tennenbaum, instituting blended learning across all subjects and grades.

To understand how innovative this approach is, it is helpful to consider the status quo. Patty Berganza's original high school, like the vast majority of schools in the United States, used the familiar model known as "whole group instruction," meaning one teacher standing and lecturing before an entire class of students. It's the model we have used in this country for over 100 years, and it was challenging enough for teachers even when classrooms were fairly homogenous. But teaching to the group is a far more difficult undertaking today than it once was; now, a single teacher is expected to produce learning in students who run the gamut from gifted to developmentally disabled and who are sometimes multiple grade levels apart. Try as they might to differentiate, teachers often end up aiming for the middle, leaving advanced students bored and struggling students in the dark.

Blended learning blows this familiar model up. While teachers still work with entire groups, students also break off for independent work where they can get the same material in different ways. This is not distance learning in the negative sense—a lone kid sitting at home in front of a monitor. Students are in the same classroom no matter what mode of instruction is being used, so there is no question of physical isolation or remoteness.



Tennebaum's move to blended learning was, to a large extent, a leap of faith. To date, there has been relatively little research on the effectiveness of blended learning in U.S. schools, and what research does exist cannot necessarily be generalized. A 2010 research review by the U.S. Department of Education found that students who took all or part of their courses online performed better on average than students who were taught face-to-face.<sup>1</sup> The evidence also suggested that instruction that combined online and face-to-face methods was better than either method by itself. But the review was limited: covering just 45 studies, it was based largely on postsecondary experiences because of the dearth of data for the lower grades.

In districts where there is data, the message is unclear. On the one hand, there are places like Los Altos, Calif., an affluent district that used Kahn Academy software for seventh graders in remedial math and saw proficiency rates rise from 23 percent to 41 percent. On the other, there are districts like Chandler, Ariz., which, as the *New York Times* recently pointed out, has spent \$33 million on technology in recent years only to see its reading and math scores stagnate even as statewide scores rose.<sup>2</sup>

Given the mixed results, many educational experts question how much technological investment is justified. As Frederick M. (Rick) Hess of the American Enterprise Institute wrote in a recent blog post: "Technology has long been offered as the miraculous balm that will transform and improve teaching and learning. Enthusiasts have said this about iPads, laptops, the Internet, desktop computers, televisions, videotapes...With each new advance, districts spend heavily on nifty new gizmos, make grand promises, and get lots of enthusiastic press. And then, each time, nothing much changes."<sup>3</sup>

Yet, as the skeptics agree, the question is not really whether online instruction is a superior medium in and of itself. The Department of Education's survey found that success with online learning depended on

time spent on instruction, as well as the quality of the curriculum and pedagogy. In other words, it's not just the technology that counts—it's what teachers do with it. Most schools these days incorporate technology into their classrooms in one way or another, but a Smartboard in the hands of an untrained educator is nothing but a high-priced overhead projector. "It feels scattered," says Tubbs of how technology is so often used in schools. And as any parent knows, technology can distract students as often as it engages them. Hess suggests that we think of technology as a popular meal-stretcher: "Hamburger Helper isn't an alternative to ground beef," he says, "it's something that you stir into the pan so that the beef goes further."<sup>4</sup>

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Tom Vander Ark is a former state superintendent and Gates Foundation official who now runs a company that invests in educational technology. He concedes that millions in recent investments have brought some disappointing results, but, he says, "that's because it was layered on top of the existing batch-print model of schooling." He says there are "hundreds" of studies that have proven the efficacy of online and blended learning. As examples, he points to Rocketship, a group of low-income schools in California that credits high achievement in part to a daily, two-hour computer lab; Carpe Diem, a top math performer in Arizona; and Robert A. Taft Information Technology High School, a Cincinnati school that converted to a technology focus and saw its graduation rate soar from 21 percent to more than 95 percent. Vander Ark urges patience. "The ability to personalize learning has dramatically improved in the last 24 months," he says, "and will be much better 24 months from now."

## MASTERING THE MATERIAL

BLAST shows promise precisely because it uses technology in a way that is systematic and intentional, and because it works toward mastery of learning. Each day is broken into two-hour blocks with 40 minutes for each station. Students report to stations based on what regular pre-tests have shown they can do. The low performers go right to direct instruction with the teacher, the high performers start with the collaborative session, and those in the middle start with online work.

Let's say the English lesson is about effective use of literary devices. Students might start with a teacher-led lesson on metaphor, personification and the like, followed by an online tutorial on the MY Access! writing program. They write a short essay, which the computer immediately scores for mechanics and grammar. If the student has too many mistakes, he takes another tutorial and writes the essay again. He sets himself a deadline (say, all clean by the third draft), and when he has met it, submits the piece to the teacher for feedback on meatier qualities like content and organization. Finally, in the collaborative session, students critique each other's work, making suggestions for improvement based on what they have learned from the teacher and online.

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Crucially, the BLAST curriculum departs from the norm in being competency-based. Only when students prove mastery over the material do they move ahead. (Unlike at some other L.A. public schools, a D average freshman year does not a sophomore make.) Thanks to the online programs, students can go over their

lessons again and again. And all the while, the software is recording every keystroke, collecting a wealth of data about what students are learning and how. Does the student best understand a concept when it's delivered in direct instruction, or does it click when she learns online? Does she show notable improvement after tutoring with her peers? How many tries did it take her to get a question right? How fast does she work? The software records it all.

Daily assessments, such as online quizzes, help students see where they are, and quarterly benchmark assessments let them see where they sit in relation to their peers. The results appear on computer dashboards designed for students and teachers, and, in the case of benchmark assessments, they are posted on bulletin boards for the world to see. “It is important to get the kids, not just the teachers, to use the data,” says Tubbs. “They know that if they want to go to U.C. they aren't going to get there with an 800 Lexile score.”

This concept of owning learning is key to the BLAST philosophy. Salman Kahn, the former hedge fund analyst who founded the popular Kahn Academy series of educational videos, spells out the virtues of blended learning in his new book *The One World Schoolhouse*.<sup>5</sup> Students are not naturally passive, he points out; they actually have to be taught to be passive—to sit still and listen to lectures—and it makes them less engaged. By contrast, he says, active learning—owned learning—lets students themselves determine where and when learning will occur. “If someone wants to study the quadratic equation on the back porch at 3 a.m. he can,” writes Kahn. “If someone thinks best in a coffee shop or on the sideline of a soccer field, no problem.” With active learning, the student controls not just time, but tempo. “The same person will learn at different rates on different days or when dealing with different subjects,” he says. “But in a conventional classroom there is a single tempo tapped out by a single person—the teacher.”



The traditional model also leads to what Kahn calls the Swiss cheese problem—holes in student knowledge. When a high school is producing seniors who read at an eighth grade level, it means everybody is moving on at the same time whether they are ready or not. A grade of 95 percent might represent an A, Kahn points out, but it still means that 5 percent of the material was not learned; it means that the student is still missing essential information that he needs to build on later. “It’s why calculus is so likely to reveal the cracks in people’s math foundations,” Kahn says. “In stacking concept after concept, calculus is the subject most likely to tip the balance, reveal the dry rot, and send the whole edifice crashing down.” The competency model is designed to prevent these sorts of gaps and to fill in the gaps that may yet occur.

## A LAPTOP FOR EVERY STUDENT

A critical feature of Tennenbaum’s curriculum is that every student is issued a laptop computer that is checked out at the beginning of the school day and returned at the end. This practice has not been universally embraced, and it is fair to say that not everyone at Alliance thought it was a good idea, either. The critics had ample reason for concern. Numerous school systems have adopted one-on-one laptop programs only to discontinue them after finding they had no influence on academic achievement, even as they allowed for cheating, game-playing, and downloading pornography. Within the Alliance network, Tennenbaum is the only school that gives students their own machines. This year the school has seen two screens crack and two hard drives crash, and a few computers have gotten “lost.” But considering that 450 computers are in use six hours a day, Tubbs doesn’t think the track record is too bad.

Besides, she says, the Macbooks serve a larger purpose, one that is integral to the critical goal of instilling responsibility in young people. “When you look around in a socio-economic environment like this,” says Tubbs,

“that computer represents trust and belief.” The laptops have become what Tubbs calls “a cultural artifact.” She recalls one day last year when the teachers had to line up the desks in traditional rows to accommodate the state’s standardized testing regime. The teachers took the laptops away during the tests, which lasted the morning, but they didn’t move the desks back to their clusters or return the computers in the afternoon. The result? “Chaos and mayhem,” Tubbs says. “There were eight kids sent to my office, when we rarely have discipline problems. I said ‘Why are you acting this way?’ And they said, ‘Miss, you put us back in the traditional classroom. You took our computers!’”

That reaction raises the question of whether Tennenbaum students will become so dependent on computers for learning that they will struggle in college classrooms where a more traditional model is likely to apply. Tubbs acknowledges the potential for culture shock, but she believes her students can make the switch. Tennenbaum offered a dual-enrollment, college-level art class that was taught by an instructor who used the classic lecture format: two hours of PowerPoint with students frantically scribbling notes. Tubbs advised the students that this structure could be their future at a community or four-year college. Were they prepared for that? They said they were. “They said we know what we have to do, but we know that we can also divide up into three circles if we had to during study groups. I thought that was pretty powerful. They know they have to adapt to the world that’s out there. And now they have a toolkit that is going to promote collaboration, which we all know is one of the major skills that every employer is looking for.”

Just as the blended learning model breaks down walls and grade levels, it can cut through social barriers, as well. For this unorthodox teen behavior Tubbs partly credits the student tutoring program at Saturday academies, where students at all levels have a chance to demonstrate leadership. “I could be a freshman lead tutor and you could be my tutee, and you’re a senior,”

Tubbs says. “And you don’t care because I can help you.” The collaborative sessions also bring out these characteristics. Overall, a community spirit is fostered because everyone connected with the school—teachers, students, and parents—was forced to figure out the new model together. “We were all on the same trajectory, which was vertical,” says Tubbs. “And when you are solving problems together on an intense learning curve, you form a family.”

## A VERTICAL LEARNING CURVE

There is no question that teaching in this environment—almost literally a three-ring circus—can be harder than it is at a traditional school. Tubbs lost one teacher who was not willing to depart from previous lesson plans and another who could not invest the extra hours that teaching here requires. Controlling the classrooms can be tough. “They have to learn a different type of classroom management where you look around the room and say ‘I know you are not on Compass Learning for Algebra II because your body language is telling me you are having fun,’” says Tubbs. “We also have a remote desktop, so we can just shut [students] down. It’s a tough balance. We want to give [students] freedom—to let them listen to music or whatever. We teach acceptable freedom, and sometimes that is a struggle with certain kids.”

Freedom has been a double-edged sword in the collaborative sessions, as well. The purpose of these stations is to have the students put their learning into practice, by producing a Power Point, for instance, or a slide-show. But without a live teacher or her online equivalent to oversee the activity, the experiences are only as rigorous as the students themselves make them. And often they have fallen short. Reviewing the sessions last year, Tubbs found them insufficiently aligned with learning outcomes; in some cases, students were working on projects that were only remotely connected to the lesson at hand. And many lacked the essential components of self-reflection and peer-reflection. “It’s project-based learning,” says Tubbs, “and in a perfect

world we would give each teacher an exemplar of what that looks like.” The school is working on it. Meanwhile, teachers now give each student in the sessions a role, such as discussion leader or illustrator. They have also created specific rubrics for teachers to grade the projects and for the students to grade themselves.

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The teachers at Tennenbaum are for the most part young (only two have more than five years of experience) and conventionally trained. Some might see both as a handicap, but Tubbs says these are extraordinary educators with a passion for problem-solving, not just problem-identification. And professional development is a daily affair. “At other schools, it’s like, ‘Oh, he [a student] doesn’t work, she doesn’t work, I can’t get that done,’” Tubbs says. “Whereas our teachers sit down and say, ‘I have figured out how to make [collaborative sessions] more rigorous. Here is what I’m doing. Does anybody want to try and make it better?’” By regularly tweaking the model and sharing their experiences, teachers generate new ideas. For instance, when teachers were feeling overwhelmed by doing daily agendas, two teachers tried doing them weekly, and soon everyone else was following suit. Likewise, the school switched the math software from Kahn Academy to Virtual Nerd based on student preferences. “It’s action research every day,” says Tubbs. “We are the ones who are pioneering this, so we are the ones who have to be willing to test and try, plan and retest.” Otherwise, Tubbs says her teachers “are just really smart, and they have heart...Those are two things I am looking for. Everything else I feel I can teach you.”



If Tubbs is pleased with her human instructors, she cannot always say the same for their online counterparts, even though computer-based learning is a hallmark of the school. With some exceptions, it is widely agreed, educational software has not kept pace with innovation. Too often, programs are little more than textbooks online. “There is no A-plus software out there,” Tubbs says. “Most of it is C-plus or below.” Problems with the English software, revealed by disappointing student performance on benchmark tests, caused teachers to shorten the online component of some English courses and depend more on face-to-face instruction. The school has also added an Internet-based program to boost writing skills. But the writing software has shortcomings, too. The computer can grade student essays on grammar and mechanics and even tell the student that she is writing at the level of a seventh-grader in the second month. But students can fool the computer with content and organization.

Ramisi Dilley, the BLAST coordinator at the school, says the software can improve with teachers' feedback. For instance, the students use Revolution Prep to take a pre-test for the California High School Exit Examination (CAHSEE). The test groups students individually and together on how well they are performing on a certain standard, such as factoring in Algebra I. But while the software is helpful at separating out strands for each student, it doesn't isolate data in other ways that would be helpful, such as for targeting students for CAHSEE “boot camp.” It may find that a student is on track to pass the assessment overall, but it does not pinpoint student weaknesses in one particular area. Conversely, the program may find that the student is slated to fail the test overall, but does not note that the student performs exceptionally well in one area. “I broke down the data and I saw these outliers,” says Dilley. “But this took me two days. This is the kind of thing the software companies need to do for us.”

Dilley's research also turned up flaws in Achieve3000, a program the school uses for reading comprehension. Teachers started to notice that when students weren't happy with their performance during class time using the software, they took the reading tests online at home and often improved. Yet because the students had opened the program during an after-hours time window, it wasn't capturing their progress or moving them ahead. In response to feedback from the school, the program has changed. “We are constantly making adjustments,” Dilley says. “It's like a machine that needs oiling all the time in order to work properly.”

The goal of blended learning is to enhance student learning, but, as at other schools, the Alliance network was further motivated by a need to save money. The model appears on track to doing that, despite first-year shortfalls. The school estimates that it has saved \$963 per student based on three fewer teachers per student and savings on the textbooks the school no longer needs. On the other hand, the school has had the added costs of laptops and technical support. For school year 2011–12, that amounted to a net loss per student of \$201. According to a report by the Michael & Susan Dell Foundation, the school district, which funded the campus, has more control over student enrollment than the charter management organization does. The school was created to relieve overcrowding, but the district did not funnel as many students there as it had projected. If it had enrolled 450 students as planned, the report says, it would have \$14 per student to reinvest. Overall, the recurring technology-related costs of the blended model come to about \$1,164 per student.<sup>6</sup> Alliance has expressed confidence that with rising enrollment and the expansion of its distance learning component, it will be able to sustain itself without foundation support.



## INDIVIDUALIZED INSTRUCTION FOR ALL

Individualized instruction is an ideal that has long been available only to those who could afford to pay for elite tutors. Outside of home schooling, the rest of us have had to settle for the one-size-fits-all model, and lately, says John Chubb, interim CEO of Education Sector, it has too often been the model for failure. As Chubb observes in his book *The Best Teachers in the World: Why We Don't Have Them and How We Could*, today's teachers have more training and have smaller classes than ever before. But even with the challenges of changing demographics, Chubb says, "It is impossible to ignore the sizeable efforts that have been made to make the traditional model work... and not conclude that it is a failing strategy."<sup>7</sup>

Blended learning offers a new way. True, the jury is still out on which models work and on how they work best. At Tennenbaum, students show progress on most benchmark assessments, but in a few cases, they have shown only modest progress or declines. Constant innovation virtually guarantees mistakes. And blended learning models can dilute the power that comes when everyone is working in concert on the same thing. Some also say that students have to be particularly motivated to succeed with blended learning. They might also add that we have been there before, as when the then-new medium of public television brought learning into living rooms with decidedly mixed results.

But when computer-assisted learning fails, it is usually because technology has been deployed as an add-on. BLAST shows that for technology to make a difference in student learning, it must be integral to instruction, and it must come with humans attached. It is a fact deeply unsettling to the teaching profession that the increased use of technology is likely to reduce the overall number of teachers we need. But we will still need as many good teachers as ever. In their wise hands, harnessed in the right way, the power of technology can be transformative. >>

## NOTES

1. Barbara Means, Yukie Toyama, Robert Murphy, Marianne Bakia, Karla Jones, "Evaluation of Evidence-Based Practice in Online Learning," U.S. Department of Education, 2010, <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
2. Matt Richtel, "In Classroom of Future, Stagnant Scores," *The New York Times*, Sept. 3, 2011, <http://www.nytimes.com/2011/09/04/technology/technology-in-schools-faces-questions-on-value.html>
3. Frederick Hess, "Technology as Hamburger Helper" Rick Hess Straight Up Blog, November 28, 2012 [http://blogs.edweek.org/edweek/rick\\_hess\\_straight\\_up/2012/11/technology\\_as\\_hamburger\\_helper.html](http://blogs.edweek.org/edweek/rick_hess_straight_up/2012/11/technology_as_hamburger_helper.html)
4. "Technology as Hamburger Helper"
5. Salman Kahn, *The One World Schoolhouse*, (London: Hodder and Stoughton, 2012)
6. Brad Bernatek, Jeffrey Cohen, John Hanlon and Matthew Wilka, *Blended Learning in Practice: Case Studies from Leading Schools*, Austin, TX: Michael & Susan Dell Foundation, 2012
7. John E. Chubb, *The Best Teachers in the World: Why We Don't Have Them and How We Could*, (Stanford, CA: Hoover Institution Press, 2012)

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