# TRANSFORMING SCHOOLS

## Using Project-Based Learning, Performance Assessment, and Common Core Standards

**BOB LENZ** with JUSTIN WELLS and SALLY KINGSTON

Foreword by TONY WAGNER

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## Videos

Videos can be found at
http://www.wiley.com/go/transformingschools.

### [Video 1. Envision Philosophy, Practices, and Design](#)

This overview of the Envision philosophy explores how
Envision rises to the challenges of engaging students,
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career, and life.

### [Video 2. Envision Defense Montage](#)

In this "highlight reel" from several portfolio defenses,
Envision students talk about education and why it matters,
demonstrating the power of knowing, doing, and reflecting.

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college? Listen to teachers and students discuss the
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own education.

### [Video 4. Tiana: Profile of a Deeper Learning Student](#)

Deeper learning makes a real difference: for Tiana, her
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School meant becoming the first person in her family to go not only to college but also beyond tenth grade. Within a few months at CAT, she realized she had what it took to imagine that future for herself. She and other students reflect on the opportunities and the mentors that got them where they are today.

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## Video 8. The Campaign Ad Project

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## Video 14. Tiana Fails Her Portfolio Defense the First Time and Revises

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One student's transformation from having a "nasty attitude" to having a bright future! Sha'nice talks about coming to Envision "not ready for life" and then graduating ready to take on new challenges.

# Documents

1. Envision Schools Course Syllabus Template

2. Envision Schools College Success Portfolio Performance Task Requirements: Scientific Inquiry

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4. What Is the Most Effective Method for Cleaning Oil, Dispersants or Absorbents?

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6. Performance Assessment Planning Template

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*To the students, teachers, and leaders of Envision Schools—past, present, and future.*

# Acknowledgments

Without Daniel McLaughlin, Envision cofounder, as well as the original Envision Schools staff and board, there would be no book to read because there would be no Envision. Thank you to Daniel and all Envision founders for believing that schools can transform lives.

We acknowledge and thank all of the Envision teachers, leaders, and students who cocreated this transformational school model through their practice. Having a vision for a transformational school is only half of the equation; the blood, sweat, and tears of our colleagues and students made it a reality.

At the core of Envision Education is a credible and defensible deeper learning student assessment system, which owes its existence to our partnership with the Stanford Center for Assessment, Learning, and Equity (SCALE). We will always be indebted to Linda Darling Hammond and Ray Pecheone for their belief in and support of our vision. Stanford's Ruth Chung Wei has been an invaluable partner in creating many of the tools that drive our assessment system.

The genesis of Envision, and therefore this book, is Sir Francis Drake High School in San Anselmo, CA. Bob acknowledges his colleagues and mentors at Drake High, whose work has inspired educators around the country and the world to rethink school and learning.

Thank you to Kate Bradford, our editor, whose positive attitude inspired us to never give up on this project. We thank Tony Wagner for acknowledging our work and pushing our thinking.

Finally, we recognize our families and partners for their sacrifices and their inspiration—not only through the writing of this book but also across our careers at Envision. We couldn't have done this without you. We love you!

# About the Authors

Bob Lenz is the Founder & Chief of Innovation for Envision Education. He is a nationally recognized leader in high school redesign, deeper learning, project-based learning, 21st century skills education, and performance assessment.

Since Envision opened its first school in 2002, Bob has led the organization's expansion to operating three high-performing schools in the Bay Area and training other educators in the Envision model through Envision Learning Partners. Today, more than 90% of Envision Schools graduates go to college, compared to just 40% of all California high school graduates; the college persistence rate for Envision students is 85%, compared to 60% nationwide.

Seeking to impact education on a broad level, Bob directed Envision's efforts to create Envision Learning Partners. ELP works with education leaders across the country to create vibrant schools that successfully prepare all students for college, career, and life. As Chief of Innovation, Bob works to bring the Envision model to schools across the country, and to guide the national conversation on school reform and student success.

Bob was the first in his family to receive a college degree, obtaining a BA from St. Mary's College and an MA in education from San Francisco State University.

Justin Wells is a founding faculty member of Envision's first school, where he helped develop Envision's graduation portfolio and defense system. For nine years, he taught English and led teacher teams in the design and implementation of semester-long, multi-disciplinary projects that drew recognition, media coverage, and

research attention from ABC News, the Buck Institute for Education, KQED, Stanford University, the Oracle Education Foundation, and the Partnership for 21st Century Skills. Along the way, Justin served as the associate research director for performance assessment at the Stanford Center for Assessment, Learning, and Equity (SCALE), where he designed prototype performance tasks for the Smarter Balanced Assessment Consortium (SBAC). Currently, he works as a consultant and coach for Envision Learning Partners, helping schools and school districts develop performance assessment systems guided by the principles of deeper learning and project-based learning.

Sally Kingston, PhD, is senior education analyst for Applied Engineering Management Corporation. She has over 25 years of experience as leader and teacher across the P-16 pathway, including serving as executive director of Envision Learning Partners. Sally writes about education for the Partnership for 21st Century Skills. She is co-author of *Leading Schools: Distinguishing the Essential from the Important* and *The Leadership We Need: Using Research to Strengthen the Use of Standards for Administrator Preparation and Licensure Programs*. She holds an MA in Education and a PhD in Educational Leadership and Organizations from the University of California Santa Barbara, where she was named Distinguished Alumnus in 2008.

# Foreword

This important book describes some very different approaches to teaching and learning for high school students, which are proving to be much more successful than the conventional methods widely used in schools today. Bob Lenz and his colleagues understand that a good education means much more than preparing students to take a test. They focus relentlessly on teaching and assessing the skills that matter most for college, work, and learning in the 21st century. They motivate students by giving them authentic and challenging work; they assess students' portfolios of work to determine college readiness, and require every student to present and defend their work. Perhaps most important, even though their approach is both challenging and demanding, they have been especially effective working with the students most at risk.

In their introduction, the authors describe some of the reasons why a very different approach to education is essential today. But in my experience, many educators, parents, and community leaders do not fully understand the economic consequences for our students and for our country if we do not reimagine America's schools.

The global economic meltdown that began in 2008 has hastened the elimination of many kinds of jobs. In their important book *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, MIT economists Erik Brynjolfsson and Andrew McAfee discuss the accelerating pace of robotization of jobs. Half a dozen years ago, no one thought that machines could handle a task as complex as driving in heavy traffic. The Google driverless car has proved otherwise, and computers now

compile and write complex financial reports and compete successfully against humans in chess and *Jeopardy!*

Although the popular media have reported the declining rates of unemployment as good news, the reality is that growing numbers of people—especially young people—have given up looking for work altogether. As I write this in the spring of 2014, the percentage of Americans who either have jobs or are looking for work is 63 percent and is at the lowest point since women began entering the labor force in significant numbers in the late 1970s. Young people in their twenties have been hardest hit of all, with one in five neither in school nor employed.

Nor does the unemployment rate say anything about the quality of jobs available. The vast majority of jobs that have been created in recent years are minimum-wage service and sales jobs. The result of all of these trends, economists tell us, is that the gap between the rich and the rest of us is greater than at any time in this country's history since 1929.

Historically, college graduates have always had an easier time finding jobs and earned considerably more than high school graduates over the course of their work life. It is no surprise, then, that an increasing number of young people are enrolling in college in response to this jobs crisis. Indeed, the mantra of many of our policymakers and educators is that all students should graduate from high school "college ready." As a result, the college attendance rate in this country is the highest it has ever been.

However, there is a growing body of evidence that attending college might not be the good investment it once was. College tuitions have increased 72 percent since 2000, while income earned by twenty-four- to thirty-five-year-olds has declined nearly 15 percent and median family income has declined 10 percent. To close this gap, students and

their families are borrowing more money than ever. College debt recently exceeded credit card debt in this country—over $1 trillion. Students now graduate with an average combined family debt of more than $30,000.

That is, if they graduate at all. Colleges have done nothing to stem the horrible attrition rate of students. Of the students who enroll in colleges, only about half complete any sort of degree. The completion rate at our community colleges—where many of our most disadvantaged students enroll—is less than 30 percent.

Then there is the problem of the job prospects for our recent college graduates. The combined unemployment and underemployment rate of recent college graduates is 53 percent—and is *up* slightly from a year ago. Far too many of our college graduates are finding that the only kinds of jobs they can get do not require a BA degree and certainly do not pay a college-graduate wage. We talk a lot about government debt in this country, but the debt I worry about most is the debt of our college graduates. It is the only form of personal debt that cannot be eliminated by filing for bankruptcy.

This dismal employment picture for recent college graduates exists at a time when employers say they cannot fill available positions for highly skilled workers. This is because there is a profound mismatch between what students learn in college and what employers say they need. It is not merely a matter of students picking the wrong college major. Employers say they do not care what job applicants' college majors are. They care about skills. According to a recent survey of employers conducted on behalf of the Association of American Colleges and Universities, "Nearly all those surveyed (93 percent) agree, 'a candidate's demonstrated capacity to think critically, communicate clearly, and solve complex problems is more

important than their undergraduate major.'"[1] The Seven Survival Skills that I wrote about in *The Global Achievement Gap* are more important than ever to employers.

As necessary as these skills are, they are no longer sufficient. Employers want something more from new hires now. Over and over again, business leaders have told me that they want employees who can "just go figure it out"—who can be creative problem solvers or innovators. In my most recent book, *Creating Innovators: The Making of Young People Who Will Change the World*, I explore what parents and teachers can do to develop these capacities. I describe the teaching methods that most successfully develop the skills needed in an increasingly innovation-driven economy—precisely the same methods, in fact, that Bob and his colleagues are using.

One of my most striking findings in interviews with young creative problem solvers in their twenties is that many became innovators in spite of their excellent schools, not because of them. Students who went to Harvard, MIT, Stanford, and Carnegie Mellon all told me that it was the rare outlier teacher who had truly made a difference in their development.

Too many of our college graduates are not learning any of the skills that matter most. In a recent study that involved twenty-three hundred undergraduates at twenty-four institutions, Richard Arum and Josipa Roksa analyzed data from the Collegiate Learning Assessment, a state-of-the-art test of writing, problem solving, and critical thinking skills. They found that, after two years of college, 45 percent of the students tested were no more able to think critically or communicate effectively than when they started college. Their book, *Academically Adrift*, makes a compelling case

for the need to fundamentally rethink the nature of a college education and accountability for results.

Employers are beginning to wise up to the fact that students' college transcripts, GPAs, and test scores are a poor predictor of employee value. Google famously used to hire only students from name-brand colleges with the highest GPAs and test scores. However, according to recent interviews with Laszlo Bock, senior vice president of people operations at Google, these data are "worthless" as predictors of employee effectiveness at Google. The company now looks for evidence of a sense of mission and personal autonomy and is increasingly hiring people who do not have a college degree. Even the interview questions they pose have changed. In the past, Google interviewers asked prospective employees brain-teaser questions like how many Ping-Pong balls can you get into a 747 or how many cows are there in Canada. Now they want them to talk about a complex analytic problem they have tried to solve recently.[2]

Our schools are not failing, as many claim; rather, they are obsolete. We continue to focus far too much time on teaching and testing content knowledge that can be retrieved from the Internet as needed. Knowledge has become a free commodity, like air, so the world no longer cares how much our students know. What the world cares about—what matters most—is what our students can do with what they know.

The Envision schools are successfully preparing all students for college, as the results of the recent SCOPE studies show.[3] And they are doing so much more than that. Through their project-based approach to learning, they are equipping students with the skills needed to be "innovation ready," as well as preparing them for the complex challenges of continuous learning and citizenship in the

21st century. Finally, the Envision schools are contributing in significant ways to the essential "educational research and development" needed to reimagine our schools for the twenty-first century.

Tony Wagner

*Tony Wagner currently serves as Expert In Residence at the Harvard University Innovation Lab and is the author of five books. Previously, he was the founder and codirector of the Change Leadership Group at the Harvard Graduate School of Education for more than a decade.*

# Notes

[1] Hart Research Associates. (2013). *It takes more than a major: Employer priorities for college learning and student success.* Retrieved from http://www.aacu.org/leap/documents/2013_EmployerSurvey.pdf

[2] See Bryant, A. (2013, June 19). In head-hunting, big data may not be such a big deal. *New York Times.* Retrieved from http://www.nytimes.com/2013/06/20/business/in-head-hunting-big-data-may-not-be-such-a-big-deal.html?pagewanted=all&_r=0. Also see Lohr, S. (2013, April 20), Big data, trying to build better workers. *New York Times.* Retrieved from http://www.nytimes.com/2013/04/21/technology/big-data-trying-to-build-better-workers.html?pagewanted=all

[3] Cook-Harvey, C. M. (2014). *Student-centered learning: Impact Academy of Arts and Technology.* Stanford, CA: Stanford Center for Opportunity Policy in Education (SCOPE); Lewis-Charp, H., & Law, T. (2014). *Student-*

*centered learning: City Arts and Technology High School*. Stanford, CA: Stanford Center for Opportunity Policy in Education (SCOPE).

# Introduction

> My first year in college was amazing. Everything that you guys taught us here, I use. Every, single, thing.

<div align="right">—Envision Schools graduate (2011)</div>

You've either heard the claim or reached the conclusion on your own: the world is changing, and our schools are not keeping up.

If you still need some convincing, there are entire books that lay out the argument persuasively. There may be some disagreement around how we got to this point and which facet of the complex problem is most pressing, but those who worry about our schools point to the same facts. America's public education system once led the world; now it wheezes in the middle of the pack. A system meant to break down walls of class and race is now implicated in building them up. Because of globalization and advances in technology, the kinds of jobs that created and defined the American middle class are vanishing before our eyes. A troubling number of kids don't like school; a tragic number are dropping out. And despite generations of rhetoric around reform, the typical student's day-to-day classroom experience has hardly changed in a hundred years.

## Great Books on the Need for Educational Change

Ted Sizer (1985), *Horace's Compromise*

Deborah Meier (1995), *The Power of Their Ideas*

Linda Darling-Hammond (1997), *The Right to Learn*

David Conley (2005), *College Knowledge*

Tony Wagner (2008), *The Global Achievement Gap*

It's this last fact that most concerns this book, not because it is more important but because it is the one that educators can act on most concretely. It is also a fact easily overlooked. In recent years, education has enflamed intense debate. You would think it was the direction of change, rather than the absence of change, that could provoke such anger. But examine the labels on all our hot buttons: testing, tenure, teacher evaluation, charter schools, vouchers, trigger laws, unions, rubber rooms, No Child Left Behind. . . . While these controversies crash into adult sensibilities, they barely ripple into the typical day of the typical student at the typical school in America. Harvard education professor Jal Mehta (2013) sums up the last hundred years: "On the whole, we still have the same teachers, in the same roles, with the same level of knowledge, in the same schools, with the same materials, and much the same level of parental support."

This book is for those who agree that school should be different and are wondering *how* to go about making it better. It is a book about school design. It's not the only thing that must change to fix the problems of American

education, but it's an essential one and the one our experience speaks to.

## About Envision Education and the Authors

Over ten years ago, after earning acclaim for his leadership of an innovative academy within a comprehensive high school, Bob founded the first Envision school, dedicated to the ideas of performance assessment and project-based learning. He recruited a team of teachers before he had a school building secured. Justin was the second teacher hired.

The summer before we opened our doors, there was a building but still no furniture. For two months, we sat on the floor of an empty room and designed our school. That initial design grew into three schools, a small charter management organization, an educational consulting division, and now the book in your hands.

Along the way, Envision Schools garnered national recognition for its innovations in performance assessment, its graduation portfolio system, its rigorous and integrated approach to project-based learning, its workplace learning internships, and its personalized learning environment that have been so successful in getting students into college who were statistically not likely to go. We serve students who come from low-income families (almost 70 percent qualify for free and reduced lunch) and whose parents did not go to college (almost 80 percent of our students will be the first in their families to graduate from college). (Figure I.1 details the demographics of Envision Schools.)

| Latino | 57% |
| --- | --- |
| African American | 23% |
| White | 7% |
| Asian and Pacific Islander | 3% |
| Other | 10% |
| English Language Learners | 11% |
| Free/reduced lunch | 69% |
| First in their families to graduate from college | 79% |

**Figure I.1** Envision Schools' Demographics, 2013–2014

Because college success is the goal we have for our students, college success is how we measure our performance. Case studies on our schools, published by Stanford University researchers (Cook-Harvey, 2014; Lewis-Charp & Law, 2014), found that Envision Schools graduates are entering and persisting in college at rates far ahead of their demographically comparable peers. One hundred percent of African American and Latino 2012 graduates completed the courses required for University of California/California State University eligibility at Impact Academy, an Envision school. Statewide, the rates are 34 percent and 39 percent, respectively. Whereas only 8 percent of all low-income students nationwide earn a bachelor's degree by their mid-twenties (Mortenson, 2010), at our City Arts and Tech High School (CAT), 72 percent of 2008 graduates and 85 percent of 2009 graduates are persisting into their fourth and fifth years of college or have already graduated. Figure I.2 provides more detail on how Envision's college persistence rates compare to relevant national averages.