# PURSUING MODERN AND IMPACTFUL PUBLIC POLICY TO RETHINK CALIFORNIA'S K-12 PUBLIC EDUCATION IN THE 21<sup>ST</sup> CENTURY a white paper by Seth Rosenblatt September 2012

### INTRODUCTION

California has the largest public school system in the United States, with more than six million students in approximately 1,000 school districts and 10,000 schools. It is governed by a very complex education code and a byzantine finance system that has evolved over the last 40 years from lawsuits, public propositions, politics, and economics. In addition to reform of the public finance system, California has the opportunity to take a leadership role in remaking public education for the 21st Century. Home to Silicon Valley and a host of innovations in information technology, California is uniquely positioned to be a leader in rethinking the very design of our public school system.

Public schools were an amazing innovation of the 19th century, recognizing that the value of education was not limited to the person receiving that education, but had value to society at large. Also, such a system would be inherently unable to measure (and collect payment for) the dispersed value received by all citizens from the education of a single child. Hence it was recognized that education was a "public good" which should be financed through public agencies collecting taxes from its citizens. Although this was a remarkable insight, the context for teaching and learning – and the value to the country from such endeavors – was very different then to what it is now. Thomas Jefferson viewed the role of public education as a necessary system to "rake the genius from the rubbish." The goal was to find the exceptional children in the population who would become doctors, lawyers, businesses people, and politicians, while the rest were largely confined to manual labor. As the industrial age progressed, classroom organization eventually became rooted in Taylorism (Scientific Management) to prepare students as dependable, efficient, and time sensitive factory workers. Indeed the structure of the curriculum as we know it today was largely established by the Committee of Ten in 1890s and has been remarkably resistant to change since.

Today schools are designed – both physically and terms of the structure of the school day and year – not very different from they were in the 19<sup>th</sup> Century despite that fact that we have completely changed the mission and the responsibilities of our public schools. We now understand that it is our interest not just to serve the "geniuses" but rather to help every child reach his/her potential. In addition to adding new subjects and depth to the curriculum, we rely on schools for much of the actual upbringing of our children. And although many of these additions¹ are smart requirements from a public policy perspective, we have rarely given schools the resources (financial and otherwise) or provided the policy infrastructure to allow

 $^{\rm 1}$  A good summary is from Jamie Vollmer, "The Ever Increasing Burden on our Public Schools" -- http://www.jamievollmer.com/poster.html

the needed structural changes to fulfill this mission. Schools have been asked to do more and more without fundamentally changing any of its structure or boundaries. If one were to look in a classroom today, with the exception of the addition of a few computers and other assorted technologies, the classroom may look identical to one from 100 years ago! We largely still use the "factory" model of education where we allocate the same fixed time for mastery of any given subject to every child, we assume that every child must meet the same standards, and we test every child to those same standards. And we still give kids the summer off, although very likely few of them are needed to tend the crops.

If we were to start over and design a public school system from scratch today, most surely we would do most things differently. It's not likely that we would have physical structures that have a single hallway with a series of equally sized "classrooms" with a single teacher assigned to single room and a few dozen students. Would we not leverage all of the worldwide resources available to us to enhance learning? Would we use time, rather than achievement, as the constant in our formula? Would we be likely to let all kids out for the summer to tend the fields? Would not the roles of our "educators" be much more varied?

Today's educational requirements are fundamentally and profoundly different, and we have the opportunity to re-think public education as we know it. Society has reached a "tipping point" due to a combination of technological advancement, economic and cultural globalization, and economic necessity:

For America's students today, commerce, politics, society, and technology are defined in international terms. They face competition from students with access to high-quality post-secondary training from every corner of the planet. Technology advances at an exponential rate, bringing with it new ways of learning and increased access to educational tools and materials.

As other countries are improving their education systems, too many American students are not being properly prepared in foundational subjects such as reading, writing, math, and science. Nor are we paying sufficient attention to cultivating the skills students will need to thrive in a globally connected job market. In one survey after another, business leaders complain that the majority of U.S. job applicants are ill-equipped to solve complex problems, work in teams, or communicate effectively.

At the same time, the problems of society are becoming even more complex and intertwined. More than ever, students today will need to rely on a sophisticated set of critical thinking skills and a working understanding of economics and the scientific process to sort out competing political arguments on everything from financial regulation to climate change.

Hewlett Foundation – "Deeper Learning"

School districts across the world are reexamining every aspect of education, including the design of the physical environment in which teaching and learning happens both inside and outside of "school." Schools are experimenting with new technologies, but adoption is slow and uneven due to resource constraints, a natural inertia and risk aversion, and policy constraints that make it difficult to make anything but incremental changes. In addition, it is difficult to measure the effectiveness of these changes. Some of the most promising new approaches are happening outside of California, and even outside of the U.S.

And we shouldn't even be satisfied with designing a public school system that works for today's world – we must design it for an era our children will grow up in, a world 20-50 years from now! The state's adoption of Common Core Standards is a step in the right direction, but metaphorically it just catches us up to the 20<sup>th</sup> Century. These standards update some parts of the core curriculum within the same framework rather than rethinking the framework itself.

And although leveraging modern technology is a core element of bringing schools into the modern era, 21<sup>st</sup> Century Learning is not just about technology– we must recognize a few fundamental changes that touch on almost every aspect of the way we run our schools, from curriculum to personnel to technology to facilities to even how we organize the school day and the school year.

Therefore, how do we create the policy and economic infrastructure to allow school districts and educators to design an educational experience that will serve children growing up in the modern era, recognizing that many aspects of public schools were designed a century ago? In many ways this task is daunting because the implications are so far-reaching. This will certainly take time, but public education's transformation appears inevitable. The question is how to best approach it and create a rational and effective transformation. Public school advocates can both recognize that so many of our schools are doing amazing things with the resources and structure they have inherited, but also admit that we must open up everything to potential change.

## **GLOBAL TRENDS**

Building a 21<sup>st</sup> Century Education must be done in the context in which our students are growing up and the fundamentally different ways teaching and learning needs to happen. The information and communication age has forever changed the availability and cost of information, the organization of this information, and humans' relationship with this information. These specific trends include:

• A Networked Infrastructure – underlying all of the subsequently listed trends is the fact that almost all human enterprises are connected by series of information networks that allow both the creation of content and the sharing of content at unprecedented levels. And this networking is just with traditional "computing" devices – it includes not only mobile devices, but also everything from cars to clothing to kitchen appliances.

- The Flattening World Thomas Friedman popularized the moniker of the "flat" world², the notion that, largely due to advancements in technology, the traditional barriers among countries both literal and conceptual have broken down. Information travels freely and near instantaneously to all corners of the globe, and political and economic events in one region of the world more directly affect every other region than they have ever done before. Most businesses now largely view their market as global. It is near impossible to live isolated from global events, culturally, politically, or economically. From a teaching and learning perspective, this "flattening" both increases the relevance of a globally-focused curriculum as well as opens up resources that previously never existed an "expert" halfway around the world is only a free Skype call or YouTube video away.
- **Digital (& Diverse) Generation** Children today were born into a world where digital access to information was normal. For these "Millenials," it is not considered "technology," but rather the normal way of interacting with the world. Many schools today do not embrace this methodology, but rather provide a barrier between them and their natural learning environment. Because many teaching methods don't embrace this digital reality considered so obvious to Millenials, school becomes the least exciting and least motivating part of a student's entire day. In addition, the makeup of the student population itself continues to increase in diversity, in terms of ethnicity, family native language, parent education level, and socio-economic status. This diversity speaks to the need to abandon a "one size fits all" approach to education.
- Facts are Free How do you educate children in a world where the sum of human knowledge is available instantaneously, for free, at their fingertips? Adults and children alike just "Google it" when they want to discover the population of a country or learn about some world event. Yet, the availability and quantity of these "facts" are overwhelming. The notion of teaching and learning needs to shift away from just memorization of facts toward the understanding and analysis of this information, pattern recognition, and innovation.
- The Primacy of Mobile Computing The tremendous advancement in information technology has allowed us to hold a device in our hand as powerful as most "computers," allowing it to be a primary information resource device for most citizens. There are currently more than 6 billion mobile subscribers, equating to more than 87% of the world's population. Even in the U.S., more than 25% of Internet users are mobile only. By some measures, mobile device use (including phones and tablets) of the Internet has already exceeded that from desktop and laptop computers. The

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<sup>&</sup>lt;sup>2</sup> The World Is Flat: A Brief History of the Twenty-first Century, Thomas L. Friedman (2005, Allen Lane)

pervasive existence of these devices and near ubiquitous Internet access has opened up incredible possibilities based on someone's location (e.g. relevance of proximity) as well as frictionless access to information (i.e. you don't need to "go somewhere" to access learning).

- **The Rise of the Social Construct** The Social Construct is the layering of a new "social" methodology and perspective on the ways we communicate with each other in every part of life, personally and in business. It changes the way we think of connections among people and how we get information, and it must to be applied on top of all of our existing media, applications, networks, platforms, and other forms of human connection. (People often refer to "social media" or "social applications," but it is a much broader phenomenon – e.g., Facebook is just a instantiation of the Social Construct in a very public way, and in many ways has trained us to be comfortable with -and indeed prefer -- the Social Construct as a way to live, work, and absorb and disseminate information). The Social Construct facilitates problemsolving not imaginable before, and every organization will inevitably apply the Social Construct to the very fabric of how it runs its enterprise. And since great learning happens in groups, it has astounding implications for teaching and learning (and may cause us to re-think the notion of cheating and plagiarism). Another big part of the Social Construct is the rise of "gamification," which is the use of game design techniques, game thinking and game mechanics to enhance non-game contexts – these approaches will most certainly be relevant for public education.
- Civic awareness and participation The above trends (world flattening, mobile, and the social construct) have contributed to an incredible increase and awareness of civic and political issues worldwide. Citizens around the world can participate in the political process like never before (even though not all of this engagement is positive and constructive), yet public education rarely gives them the skills, context, and media literacy to be productive citizens in a multi-cultural and economically diverse world.

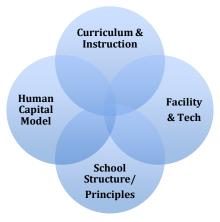
Just as it would have been impossible 20 years ago (or even five years ago) to accurately predict the world of today, it would be foolish to suggest we will know what the world will look like 20 (let alone 50 or 100) years from now. However, it is safe to believe that many of these above trends will continue to grow, enhance, and become even more relevant. The world will be even more networked, information will be more distributed, global borders will continue to be blurred, and life will become more interactive, cooperative (and competitive), high tech, automated, and more complex. Also we must recognize that part of building a  $21^{\rm st}$  Century Education is focusing on those skills that are inherently adaptable to the needs and context of that time, regardless of what specific events or trends may appear.

# **CHANGES REQUIRED**

Building a 21<sup>st</sup> Century Education will require simultaneously re-examining four fundamental components of public schooling:

- **Curriculum & Instruction:** adjusting the curriculum to make it more relevant for a global world in the context of all of the above trends
- Facilities & Technology: designing sustainable schools to create flexible learning spaces and have the technology infrastructure to support 21<sup>st</sup> Century Learning
- **Human Capital Model:** changing the employment model to truly make teaching a "profession," define the relevant positions for the 21<sup>st</sup> century, and attract, hire, retain, train, and reward the best educators for our children
- School Structure & Principles: re-thinking some of the very foundational components of how school is run and break down some of the physical and virtual walls to learning

There four areas are all interrelated, and changes in one area will often require changes in others to support it.



### Curriculum & Instruction

As illustrated by the above trends, children are growing up in a world that is ever more interconnected and largely absent of barriers to others around the globe. Both the content of our curriculum, as well as the approach to learning itself, needs to reflect this.

A relevant, global curriculum would likely put a greater focus on international cultures, economics, language, and politics. It would focus on civics, social justice and the global problems society will face over the next century. It is also necessary that schools focus more on media and communication skills (media literacy), as the need to analyze the ever-increasing pipeline of data is crucial, and every citizen is a writer and contributor in this new Social Construct.

In such a curriculum, the emphasis would need to be on "active learning," the concept that students can lead their own education path and develop critical skills that are not necessarily specific to any subject matter, but rather transferable across

them – examples include collaboration, communication, research skills, critical thinking and analysis, creativity, problem solving, improvisation, resilience, and risk taking. When "facts" are easily discoverable, these are the differentiating skills that will help students be successful as they become adults.<sup>3</sup> Many school districts deploy some limited forms of "project based" or "student-led" learning (many of which are subject cross-disciplinary), but the requirements to adhere to certain standards combined with limited professional development for educators limits the practical ability of school districts to more broadly apply these frameworks.

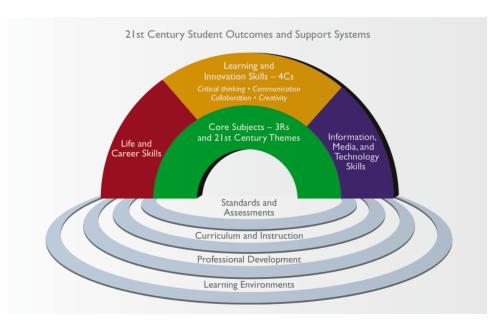
A 21st Century Education would also have to emphasize the "whole child," the subjects outside of the core of math, science, language arts, and history. Whether it be music, arts, physical education, foreign language, technology, design, speech, community service, study skills, dispute resolution, or many other "life skills," schools must have the flexibility to offer multiple and flexible curriculum choices for students to both allow students to be "active learners" and follow their passion but also to reinforce critical skills that may not be necessarily tied to any specific core subject.

The new construct also allows us to personalize education for each student. Although already schools can provide a different path for certain subsets of students (Special Education, GATE, "tracked" classes, etc.), technology now allows us to make each child's path through school truly unique. This would be more than just differentiating instruction or giving extra homework to accelerated students, it would be implementing a pedagogical system that truly treats each student uniquely. "Inverted learning" methodologies can be deployed so that the "lecture" of background materials can be reviewed at home online by students before class time. which is then used by the educator to further differentiate work for each student. Both class work and homework would be personalized, and even assessments could be individual to the student. Although some form of testing should be used for accountability and ensuring that school districts are living up to their responsibilities to all children, assessments would be more relevant and formative giving educators immediate feedback on student knowledge, mastery, and skills to allow the educator to continue to customize the instruction for that specific student. Assessment could also be adaptive – altering the test questions based on the test takers responses to earlier questions.

The Partnership for 21<sup>st</sup> Century Skills (<u>www.p21.org</u>) summarizes many of these concepts in a framework that represents both student outcomes (the arches of the rainbow) and support systems needed (the pools at the bottom).

<sup>3</sup> To be clear, facts are still relevant to learn and even memorization is an important skill in certain

circumstances. However, in the case where information can be "looked up" instantaneously, it allows educators to have the flexibility to emphasize the meaning, relevance, and credibility of information more so than the specific facts themselves.



## Facilities & Technology

21st Century teaching and learning requires a different physical plant to support it. With the exception of the addition of computers and related technology in classrooms, most schools and classrooms are designed the exact same way they were a century ago. That physical structure was logical in an era where there was no better rational and practical organizing system of students. Now we no longer have such constraints. The breaking down of boundaries in the world around us (both physical and virtual) needs to happen in our school facilities as well. School districts should view the world as the true classroom. That said, there are still strong reasons to have a physical center of learning.

We must first start with the notion that the classroom as we currently know it is obsolete. With the world as the classroom, there is little value in sequestering a few dozen students and assigning them to a single classroom and a single teacher to be the expert for their learning. Some learning may actually happen best in large lecture halls, some better in small group instruction, some in collaborative group work, while some learning is served best by individually led project work. In order to facilitate all of these approaches, we must have physical structures that have quality, flexible space to allow for near-instantaneous reconfiguration. How can we design our school campuses to be "resource centers" open to all and flexible to provide support and learning for any student on any subject?

In addition to breaking down the barriers of place, we would also need to break down the barriers of time, discarding the notion that school is only "open" during certain times. If student achievement, rather than time, were the goal, then wouldn't the school (physically or virtually) be a resource for all students 24/7/365? Admittedly, such a new construct of time and place would present a monumental organizational and management challenge for schools, but one well worth pursuing.

School facilities of the 21st Century must also be environmentally sustainable, including smart power management (and generation), efficient water management, use of sustainable building materials, and infrastructure to monitor usage and provide feedback mechanisms. In addition to being environmentally friendly, a smartly designed campus would both save money and support the curriculum, as the very aspects of sustainability can be linked to learning opportunities. Sustainable school facilities will also often include smart transportation solutions. Particularly in suburban and rural areas, increased enrollment shouldn't mean an increase in cars on the road or increased traffic and safety hazards.

Designing and building school facilities with an underlying technology infrastructure is crucial. In addition to providing the physical access (broadband access to the Internet, wireless connectivity throughout the campus, etc.), we must look to technology to provide the main window into learning. This is more than electronic "textbooks" (as the very notion of a textbook may be obsolete), but rather the access to a series of resources, including Internet sites, applications, "books", etc. Leveraging technology is really about leveraging the resources that it opens up for students and educators alike. In addition to content available, this technology infrastructure facilitates access to human resources that were heretofore not easily accessible. Experts around the globe could augment teaching and become virtual members of the school's staff. However, the curriculum and professional development would have to be designed to both allow and encourage the use of these resources.

This same technology infrastructure can also provide a perfect opportunity to leverage the power of the Social Construct. It is inevitable that all communities (including schools) will have "private social networks" to support the teaching and learning process. These sites will be locations for virtual sharing and collaboration among staff, students, and even parents and the larger community. However, these applications will have to be carefully designed and deployed (with adequate training and professional development) to ensure their best use as well as safeguard privacy.

In order to use these vast new resources, each student must have both a "device" to access learning as well as a network connection at home (further extending the boundaries of the school). Many school districts are starting "BYOD" (bring your own device) policies, but this is not a sustainable model for most districts. As some form of mobile device (likely a tablet) becomes as de rigueur as a pad of paper, schools will need to supply and manage these access devices. In addition, public policy will have to address families who do not have, or cannot afford to have, Internet access at home. In an era where "inverted learning" is core to the curriculum and learning does not stop at the school walls, it is essential that each family can access these learning resources.

A technology infrastructure is also required for analysis and accountability – the ability to understand what's working, what's not, and how a school district, a school,

or an individual educator can improve instruction. The ability to truly personalize learning and remove the school boundaries would be impossible without an underlying data and analysis system.

Technology is not without its potential problems, unintentional consequences, and potential for misuse. Policies will have to be established to address issues such as obsolescence, privacy, access, resources, as well as potential student cheating and distraction from such digital devices.

## The Human Capital Model

We cannot implement the pedagogical changes required unless we re-think the current model for human resources in public schools. Just as the schools themselves were designed on a "factory model," so was the employment model. Other than specific subject credentials, "teachers" are largely a single class of employees who are each assigned to a subset of raw materials in this factory. We expect them to do the job of "professionals" without treating them as such (and as many argue, as they don't even treat themselves) or giving them the environment to flourish as professionals. Illustrated by some of the success in Finland<sup>4</sup>, we must enact policy and practice to enable teachers to be great professionals, and to do so we must focus on a few key elements:

- 1. Create a system that attracts the most talented people to the profession, sets a high bar to secure a teaching job, and brings prestige back to the profession
- 2. Provide teachers with a high degree of autonomy and trust and create a system of shared responsibilities instead of competition among teachers and schools
- 3. Focus on professional development

If we are successful in making these changes and elevating the profession of teaching, it is likely many of these other "21st Century" changes would follow. Breaking down the walls of the school and opening up the pool of resources makes the "professionalization" of the teaching profession even more critical and has a number of implications:

• The role of the "teacher" changes: The areas in which an educator need be expert would likely shift, and the role of such educator may be more akin to a "coach" who can motivate and mold students to reach their potential, all the while deploying the near infinite amount of resources at their disposal. Also, some educators would be better deployed in different forms of teaching and learning – whether it is large group instruction, small group instruction, mediator of collaborative groups, mentor/trainer, etc. Ultimately each employee – teacher or otherwise – will have to be hired based on their specific contribution, not as a member of any undifferentiated class of

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<sup>&</sup>lt;sup>4</sup> See Finnish Lessons: What Can the World Learn from Educational Change in Finland? by Pasi Sahlberg

employees. The role of teacher and administrator is likely to be blurred, as almost every job may have aspects of both.

- Recognition of the critical role of the community: Although most schools encourage parental involvement in their kids' education, it is more critical than ever to leverage community resources just like global resources in the teaching and learning process. Particularly with limited financial resources, schools need to flexibility to leverage other members of the community as virtual members of their own staffs.
- "Work rules" do not apply: The work of professionals is not defined by the hours they work, but they job they get done. Particularly in an environment where school is an constant resource for students and learning happens outside any boundaries, the notion of creating time restrictions on work is quaint as best, destructive at worst.
- Relevant and Personal Compensation: Just as education will need to be personalized for each student, compensation should be relevant for each employee. Although there is no perfect system for compensating employees (even in the private sector), there most certainly needs to be a system that allows school districts to pay their employees based on factors other than their tenure and education. This could include areas such as the specific role they have, their performance, and even the supply/demand forces for that particular role. In an organization where employees are paid differentially, policy changes may need to address current requirements of full disclosure of individual salaries.<sup>5</sup>
- Relevant and Formative Evaluation: Just as assessments for students need to be formative and provide relevant feedback, so do evaluations of employees. In fact, a significant part of any boss' job will be to provide these meaningful evaluations for their employees, and systems can be set up for peer evaluations as well. Evaluations should have the primary purpose or providing such actionable feedback to the employee (and to support the teacher as a professional), but also could be relevant in setting compensation levels. Lastly, districts need the flexibility to move out underperforming employees given reasonable due process.
- Changing the Adversarial Relationship Regardless of whether an employee class is represented by a union, a modern organization must shed the traditional adversarial relationship between itself and its staff. A professional organization would be partners with a school district in serving

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<sup>&</sup>lt;sup>5</sup> For a more complete analysis of the issues with salary disclosure in an environment of differential pay, please see <a href="http://www.eschoolnews.com/2012/05/29/why-teacher-merit-pay-cant-work-today%E2%80%94and-what-can-be-done-about-this/">http://www.eschoolnews.com/2012/05/29/why-teacher-merit-pay-cant-work-today%E2%80%94and-what-can-be-done-about-this/</a>

students. Innovation and change can actually be led by employee groups, as it would be their members who would have the expertise and experience to make continual improvements in the education environment and structure.

- Focus on Professional Development In order for districts to truly embrace new technologies and new methodologies for 21<sup>st</sup> Century Learning, there needs to be a serious commitment and resources to professional development at all levels of the organization. This includes continual learning for 21<sup>st</sup> Century approaches and topics, but also the more formal adoption of professional learning communities within a district for employees to support each other in this transformation.
- Reexamine rules of Governance It's likely that the School Board will remain an essential institution (and even more so if given greater flexibility and accountability), but the relationship between the school board and the community also needs to reflect the above trends. Although we must preserve the essence of the Brown Act to ensure transparency and openness, we must recognize that school boards have the opportunity to leverage social media in a very powerful way. Such use would actually increase community involvement and transparency, yet currently boards must work under rules that were created before such a construct was envisioned.

## School Structure and Principles

Changes in curriculum, facilities, and human resources ultimately change the very structure and guiding and organizing principles of school. The breakdown of the virtual and physical walls as well as the use of global resources should make us think differently about the very cadence of a child's education. How do we structure a school district so that school is almost "always open" and a resource to any student who needs it for any purpose? How do we change grade levels and requirements such that achievement, not time, is the constant? Is age the most important sorting factor for students? Particularly with a increasingly diverse student population, the current constraints on the pacing of learning only exacerbate inequalities, e.g. poor children having higher learning loss over the summer, etc.

Also, in such a fluid and personalized learning environment, how do we measure success? Most certainly, we would not rely on a single summative, reductionist, assessment (e.g. API) but rather have multiple, actionable measures that both provided real information for school districts to improve education and at the same time ensure we meet high standards of teaching and learning. We would develop new measurements and discard some existing ones. The irrelevance of "work rules" as described above combined with the "always open" notion of school may make certain areas of employer-employee group negotiations moot. For example, what is the relevance of a work "calendar" when work is measured by task rather than time (as it would be in a professional organization). Also, in an environment where

classes are flexible and students' paths through their education are fluid, historical notions of "class sizes" become irrelevant. As we make these changes, new norms will emerge and evolve.

### IMPEDIMENTS TO CHANGE

Moving to a 21st Century Education model will take time (potentially a few decades), and there are significant challenges to change the status quo. First of all, it is difficult for policymakers, parents, and voters to truly understand the implications and power of remaking schools, with the underpinning of new technology, in a 21st Century mold. Secondly, policy is influenced by many entrenched interests who have a self-interest in the outcome, and many – including labor unions, textbook manufacturers, and others – may be threatened by change. These organizations have strong political influence. Thirdly, school districts cannot implement all of the above changes as the California Education Code is not updated to reflect these realities and actually acts as a barrier to constructive change. Lastly, school districts have a sense of inertia and risk aversion because, ultimately they are dealing with human lives and the appetite for "experimentation" is understandably limited.

### HOW WE CAN PROCEED

A true statewide blueprint for 21st Century Education needs to be built, and it would specifically need to relate to policy changes required at the state and local level to not only allow, but to actually encourage and/or require, school districts to make steps in this direction.

A strategic policy plan and roadmap can be built in partnership with education, business, parent and community organizations and other interested groups. These changes would reflect policies to enable the adoption of smart technology solutions, curriculum changes, facility changes and incentives, structural changes to public education, and the financing system changes required to support it. This plan would be used to educate and work with state leaders and locally elected officials to push forward policy changes.

The next steps in such an effort could include:

• Education "Convening" -- organizing an event that would bring together representatives from multiple interests groups both within the education field as well as those from outside. It would include government and civic leaders, education leaders and teachers, reform advocates, business community members, technology companies, union representatives, architects, social services providers, and many others. The event would start with the envisioning of what schools will look like in fifty years, and then discuss the specific steps on the roadmap to get there. This event will serve both as an educational forum to prime further discussions to advance the above ideas, but also as a way to better understand the political and practical realities of making such changes and informing the best route to promote them.

- **Review of Existing Models** -- reviewing and reporting on existing examples of schools and districts where such changes have been made, how it was done, what the barriers were, and what results were achieved. These examples could be even outside of the state and the country, and would certainly look at example charter schools for such models as well as potential traditional California school districts that are, or could be, models.
- **Examine Ed Code** -- scanning the California Education Code to find where potential barriers exist to implementing 21st Century Education, whether they be examples of restrictions preventing school districts making changes or lack of requirements that would facilitate such changes. A report on the main section of the code requiring overhaul would then inform specific policy change recommendations.

Although seemingly a Herculean effort, we must come together to truly understand the implications of our modern world on the practice of teaching and learning, and build the foundation not only to serve kids today at the beginning of the 21st Century, but to have a system flexible and adaptable to serve children's needs -- and indeed our entire society's needs -- for many years to come.

Seth Rosenblatt is the President of the Governing Board of the San Carlos School District, currently in his second term. He also serves as the President of the San Mateo County School Boards Association and sits on the Executive Committee of the Joint Venture Silicon Valley Sustainable Schools Task Force. He has two children in San Carlos public schools. He writes frequently on issues in public education, including in both regional and national publications as well as on his own blog. In his business career, Seth has over 20 years of experience in media and technology, including executive positions in both start-up companies and large enterprises in positions across finance, marketing, business development, technology and general management. Seth currently operates his own consulting firm for technology companies focused on strategy, marketing and business development. Seth holds a B.A. in Economics from Dartmouth College and an M.B.A. from Harvard Business School. He can be reached at seth@rosenblatt.org.