



Innovation and Deeper Learning

Model High Schools



For decades, it has been recognized that academic knowledge and skills are themselves insufficient for enabling students to successfully navigate a rapidly changing world, participate in a complex and increasingly diverse democracy, and engage fully in the ever evolving 21st century workplace. – American Institutes for Research¹

In the minds of most who have thought about it, it is clear that today's students need a globally conscious education for what is assuredly a global era...Yet the vast majority of teaching around the world is still geared to preparing young people for lives in the 19th and 20th centuries. – Howard Gardner¹

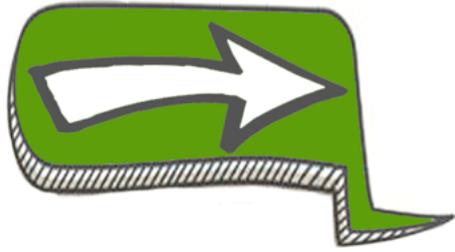
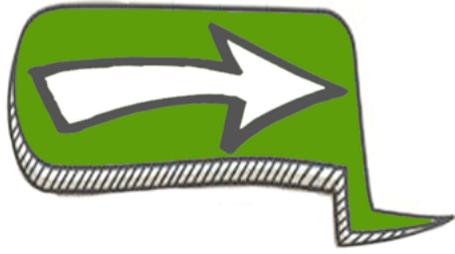


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Introduction

BROCKTON, Mass. — A decade ago, Brockton High School was a case study in failure. Teachers and administrators often voiced the unofficial school motto in hallway chitchat: students have a right to fail if they want. And many of them did — only a quarter of the students passed statewide exams. One in three dropped out. — New York Times²

The fact that Brockton High School has a 2016-17 *Course of Study Guide* is not unique; most high schools do. What is unique is that the guide is “front-loaded” with statements on core values and beliefs, rigor, relationships and relevance and on 21st Century learning expectations. Perhaps most significant is the following: (Students will develop) “the ability to frame, analyze, and synthesize information in order to solve problems, answer questions, and apply (knowledge) to new situations.”³

Brockton is a large high school, enrolling 4,146 students of whom 77% are minority and 81% are economically disadvantaged. Yet, the school has a 91% graduation rate and 16% of its students take Advanced Placement (AP) courses. Forty percent score advanced in math and 32% in English on Massachusetts Comprehensive Assessment System (MCAS) tests.⁴ Once considered one of the poorest performing schools in Massachusetts, today it is one of the best. Further, reform for Brockton was not some “flash in the pan” approach. It began with teachers who fostered a deep and sustained focus on literacy. That focus endures today.

This is what Willard Daggett’s International Center for Leadership in Education (ICLE) has to say about Brockton.

Recognized as an ICLE Model School for 13 years, Brockton High is a school that responds to

change while maintaining a focus on student achievement. Building on the foundation of literacy for all in the areas of reading, writing, speaking, and reasoning, Brockton is proof that perseverance and hard work bring results. Through shared leadership and responsibility, the school has effectively addressed changes in external accountability measures, budget constraints, discipline laws, and much more. The Brockton community uses its energy and talents to renew and adapt to the ever-changing demands of learning and teaching by constantly reflecting on practices, consistently striving to improve, and sustaining a commitment to ensure everyone at the school has a voice.⁵

Clearly, Brockton High School is a model by conventional standards, but is it a model of deeper learning? Part of that answer lies in how we define deep learning, the rest in how the school actualizes those opportunity for students.

The national “Deeper Learning Network” is a community of practice comprised of ten separate school networks with more than 500 schools in forty-one states. The network grew out of landmark work defining deeper learning by the William and Flora Hewlett Foundation⁶. These school networks themselves serve more than 227,000 mostly low-income and minority students. The network describes deeper learning as follows:

*To meet these (21st Century) demands, students will need “deeper learning,” a mix of knowledge, skills, and dispositions that includes critical thinking and problem solving, effective communication, collaboration, an academic mindset, and the ability to learn how to learn—all applied to the mastery of rigorous academic content.*⁷

This definition aligns with the domains identified earlier by the foundation itself after interviewing over 100 educational leaders. These are: Mastery of core academic content; Critical thinking and problem-solving; Working collaboratively in groups; Communicating clearly and effectively and Learning how to learn.

If we accept these definitions of deeper learning, then the second aspect of how a school actualizes such opportunities deserves a view. In 2014, the foundation funded a proof of concept study by the American Institutes for Research (AIR) involving 19 schools from the Deeper Learning Network. The first of three reports in that study found:

“While these approaches may differ from one another, it is assumed that they will be collectively distinct from more traditional and commonly implemented educational approaches. The data discussed here provide evidence to support this assumption.”⁸ Schools did indeed use a variety of approaches to foster deep learning. Major findings showed.

- Network schools took a range of approaches to developing the deeper learning competencies.
- Most schools integrated project-based learning to develop mastery of core academic content knowledge and critical thinking skills.
- Interpersonal skill development was a goal at a majority of network schools and was addressed through instruction, assessment, and internship opportunities.
- Network schools used a variety of structures and strategies to encourage the development of academic mindsets and learning-to-learn skills.

- Most network schools had established structures and cultures to support the implementation of instructional strategies aligned with deeper learning.⁹

No two deep learning schools looked the same, but all had common elements and how these schools looked depended on the support of their communities, the skills of their teachers, the quality of their leadership and the needs of their students.

What follows in this white paper is a selection of model schools who all have, to some degree, fostered deeper learning. Schools were selected by internet search, or through references in “deeper learning” reports and documents. It should be noted that information in these reviews is based on information from school web-sites, in some cases the web sites of state education agencies, media reports and ratings, such as those published by *US News and World Report* or *Newsweek*.

It is hoped that this paper will serve as a resource directory of sorts, giving interested parties the opportunity to read more widely about these schools, consult the referenced documents, or to contact the schools directly. These are not, of course, all of the deeper learning schools. If the Deeper Learning Network is any indication, there may be many such schools across the country.¹⁰ As, hopefully this paper will show, there are also undoubtedly many such schools across the world. Many operate as islands of excellence and independent thought in broader local, state, and national systems that are not yet configured to promote anything other than a standardized system of instruction and delivery.

Such schools need to be celebrated and sustained. Above all, their lessons need to be learned.



Grand Arts: Ramon C Cortines School of Visual & Performing Arts¹¹

With a minority population of 83%, of whom 73% are socio-economically challenged, the Ramon C Cortines School of Visual & Performing Arts in the Los Angeles Unified School District (LAUSD) still graduates 96% of its students on time. Heralding back to the definition of deeper learning, one finds that the school espouses several of the deeper learning domains. Its posted student learning outcomes are to foster:

Critical Thinkers

- Who use data, logic and creativity to solve problems
- Who process, synthesize and evaluate information
- Who connect interdisciplinary concepts through the arts
- Who access and use a variety of resources, including technology, to produce academic and artistic works

Responsible and Socially Aware Citizens

- Who take responsibility for personal and group choices and actions
- Who respect differences, beliefs and diverse points of view
- Who contribute time, energy and talent to improve the quality of life in the global community

- Who consistently work toward maintaining a healthy lifestyle, community and planet

Effective Communicators

- Who communicate artistically and persuasively in various settings
- Who establish and maintain strong interpersonal relationships
- Who read, listen, comprehend and articulate with confidence and skill
- Who use skills and knowledge to defend their point of view
- Who understand and respect their audience¹²

What is unique about the high school is that these outcomes are cemented through the arts. Indeed, Cortines may be one of the most distinctive arts-centered high schools in the country. The school, which cost \$232 million to build, anchors the north end of Los Angeles' "Grand Avenue Cultural Corridor," which includes the Disney Concert Hall, the Music Center, Colburn School of Music, Museum of Contemporary Art, the Cathedral of Our Lady of the Angels, and The Broad Art Museum. Additionally, the school, which houses over 1,400 students, is meant to serve as a public facility that can be used by the community. The school houses a 927-seat professional concert hall with a Broadway-sized proscenium stage, a 250-seat black box theatre; and outdoor amphitheater; a professional scene

shop; photography and broadcast studios; multiple science and computer labs; specialized spaces equipped for art, music, and theatre classes; and four dance studios.

The school also extensively partners with community groups and colleges. Its list of partners on Grand Avenue alone underscore the opportunities created for students:

- The Broad Foundation
- Center Theatre Group
- The Colburn School
- Grand Performances
- Glorya Kaufman Presents Dance at the Music Center
- L.A. Opera
- Los Angeles Central Library

- Los Angeles Master Chorale
- Los Angeles Philharmonic
- MOCA
- Music Center
- REDCAT

Not every high school can be a Cortines, and the early history of the school underscores the risk of being too visible and too expensive. Budget fights prompting a rapid turnover in principals were accompanied by a tug and pull between a LAUSD board member who wanted the majority of students to come from low-income surrounding neighborhoods and philanthropist Eli Broad who wanted the school to house only the most talented students and who argued to remove the school entirely from district control.¹³



Ørestad Gymnasium¹⁴

Creativity and innovation are essential skills in our future society. We aim to create a school where teachers and students stimulate each other to think in creative and innovative ways. We teach students how to participate in a society in which the production of knowledge and experience is playing a steadily increasing role.¹⁵

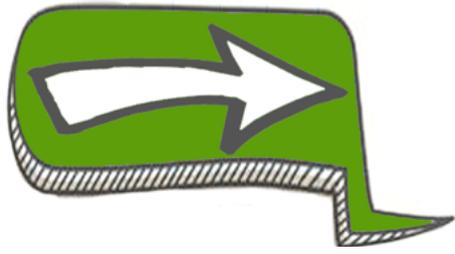
Ørestad Gymnasium in Denmark is constantly experimenting with new kinds of teaching. The equivalent of a high school in the United States, the gymnasium organizes teaching as an interaction between:

- Traditional classes/plenary environments
- Group based learning environments
- Individual acquisition of knowledge (e.g. virtual teaching)
- Real life cases taught in co-operation with external partners.

Further, the gymnasium partners with with various pedagogical research institutes. including the Danish Institute for High School Pedagogy, Knowledge LAB, and Learning Lab Denmark at the School of Education, University of Aarhus.

Like Cortines in LAUSD, the architecture of the gymnasium school is a critical component in how teachers approach instruction. Ørestad is an open concept, or what we would call an open classroom school, in which everyone can see everyone else. The school describes itself as a modern high school with a media profile. “Our aim is to be the obvious school choice for students who wish to prepare for further and higher education within media, communications, and culture. At the same time also being a high school for everybody else.” Teachers can deliver upto 25% of their instruction virtually.

Additional materials and videos about Ørestad and its instructional approaches can be found on the Global School Alliance website.¹⁶



Steve Jobs Schools

While not high schools, the nearly twenty Steve Jobs Schools in both the Netherlands and South Africa have been named one of the thirteen most innovative schools in the world by Tech Insider.¹⁷ The values and mode of instruction in these primary schools, which serve ages four through thirteen, offer lessons that can inform high schools as well and, as such, are included here as models of deeper learning.

While one might be forgiven for thinking that these are “high tech” schools, the concept is much deeper and is based on “10 promises to children” which are displayed prominently in every school:

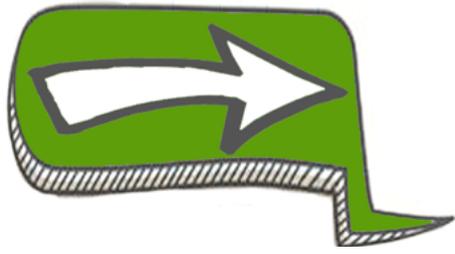
- *We promise to listen to you carefully if you tell us what you want to learn, and to observe carefully how you learn best.*
- *We will help you ask good questions, so you can determine yourself what you want to learn.*
- *We will help you to become even better in what you are already good at.*
- *We will always challenge you to also try difficult things and to learn new things.*
- *We promise you that you may always choose yourself what and when you are going to do something; we will help you with that choice if you consistently ignore some things.*
- *We will help you relate to others without bullying or without being bullied.*
- *We will teach you how to cooperate well with others.*

- *We promise you to always utilize the latest techniques, to prepare you for tomorrow’s world.*
- *We promise to teach you to use your imagination to be able to make things.*
- *We promise you that you will be well prepared for your next school and for the rest of your life once you have finished our school.*

Students do not attend classes, but participate in core groups; teachers are coaches and subject experts. Parents can choose a later start time for their child. Again, as one might imagine, in a school named after Steve Jobs, a high premium is placed on technology, and particularly on the use of iPads.

Without needing more teachers and with the same financial means, the talents and possibilities of the children can be anticipated so much better. At the same time the intensive use of a tablet in the learning process suits the children that are born in the 21st century so much better. Interactivity, visually, adaptation and gamification all ensure that the children are more intensely and more enthusiastically occupied with their learning activities. It also creates much more room for the teachers to give individual attention and to be actively occupied with activities in the area of 21st century skills, including creativity, and certainly not just in the digital world.¹⁸

The primary web site for Steve Jobs Schools provides extensive materials that can be consulted by educators around the world.¹⁹



Clearwater High School²⁰

At all hours of the day and night, the building is alive with the sound of people learning, working, playing, laughing and enjoying all kinds of educational activities, athletic events, musical performances, art exhibitions and the like. We believe in the words tradition, honor and pride while building rigor, relevance and relationships in our school. We take our traditions seriously, honor each other and take pride in ourselves and our school. – Keith Mastorides, Principal

Clearwater High School in Clearwater, Florida houses nearly 2,000 students in grades nine through 12. Enrollment is 50% minority and 52% economically challenged. Founded over 100 years ago, Clearwater is an old high school that prides itself on tradition. Yet, it is not a conventional high school. Clearwater uses a mode of instruction called “Wall to Wall Academies.”²¹

It is the academies that set the school apart.²² Spanning four broad content areas, each gives students the opportunity to leave high school with more than just a diploma. Dual credit courses, internships, on-the-job training and industry certifications are embedded in each academy model. The school also offers a Career Academy for International Culture and Commerce (CAICC) which introduces students to the international business environment and the cultural aspects of working and living in a global business community. Studies focus on culture, business protocol customs, marketing, communication,

international economics and finance, import and export basics, and the use of technology in business. This program is designed for students to explore careers related to international trade. Like all Clearwater Academies, the program prepares students for post-secondary or direct entry into the workforce.

For the third time, Clearwater High School has been recognized as a Model School by the International Center for Leadership in Education (ICLE).

Listed among the *Washington Post*'s 2017 Most Challenging High Schools as 85th in Florida²³, caution should be exercised in holding Clearwater to conventional standards.²⁴ Other measures should apply. For instance, while *US News* notes that the AP pass rate is 32%²⁵, it should be remembered that with over one-half of the student body being economically challenged, over one-half take at least one AP course.



The Preuss School

Magazine rankings of public high schools are always subject to a certain amount of conjecture. Yet, one school has consistently ranked among the top in the country²⁶ and has been cited three times over as the most transformative high school in the nation by *Newsweek* for its ability to enable first generation and low income students to go on to college.²⁷

Indeed, admissions criteria mandates that neither parent have gone on to college.

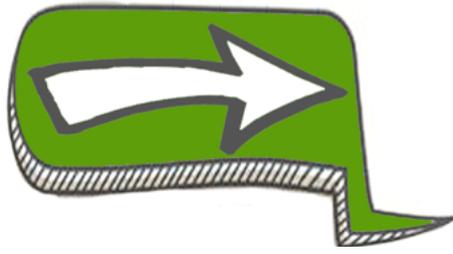
The Preuss School is chartered by the San Diego Unified School District and operated by the University of California (UC) San Diego. The school, serving grades six through twelve, opened in 1999 in portable buildings on UC San Diego's Thurgood Marshall campus. The school enrolls 840 students of whom 98% are minority and 98% are socioeconomically disadvantaged.²⁸

Preuss lists its elements of success as follows:

- The creation of a strong and influential "college-bound culture" at the school with high expectations for all students
- Longer school day and school year: Preuss logs 74,669 instructional minutes compared to the state requirement of 64,800. After completing middle and high school, Preuss students have accumulated almost an entire extra academic year.

- An energetic team of teachers with a college major and expertise in their subject matter
- Collaborative, weekly professional development, essential to our "culture of learning"
- A rigorous single-track, college-preparatory curriculum strategically designed to fulfill and exceed University of California "a-g" admission requirements
- An array of academic supports for struggling students including tutoring, mentoring and counseling
- Innovative Advisory class (University Prep) and curriculum in which students and their parents are guided and supported by the same teacher from grade 6 to 12. This strategy is based upon the successful *Advancement Via Individual Determination* program model developed at Clairemont High School.²⁹
- Parent engagement and involvement
- Strong connections with the San Diego community for volunteers, internships, academic partnerships and program sponsorships³⁰

Preuss graduates 97% of its students and 100% take Advanced Placement (AP) tests with 62% pass rate.



NYC iSchool

The NYC iSchool opened in 2008 and today enrolls 450 students. The Class of 2018 is 64% minority and 44% economically challenged. Twelve percent of students have IEPs. The school typically receives about 3,000 applications a year with students coming from all five boroughs of New York City. Some travel over an hour and a half a day to attend the school. What is the draw?

While remaining an “academically selective” school, one of the hopes surrounding NYC iSchool was that innovations pioneered there could be scaled up elsewhere. The school practices what it terms “challenge-based learning”, which are intensive nine-week interdisciplinary courses based on real world challenges. It is defined as follows:

Modules are designed to develop students' understanding of big ideas and broad global concepts, and their development and application of 21st century skills - the kind of things the leaders hope students will remember and still need to know and use 20 years from now. Modules are developed with real work and real world challenges in mind; whenever possible, this work actually derives from the needs of real clients, who might come to the iSchool with a real challenge or task for students to complete. Solving this challenge, or completing this job, then becomes the driving force and curriculum of the module.³¹

The school graduates 95% of its students and with 95% proficiency in English and 96% proficiency in math, scores exceed both city and state. Sixty-five percent are AP tested and 53% pass.³²



Grand Rapids Public Museum School³³

The Grand Rapids Public Museum School is the product of an ongoing educational collaboration between the Grand Rapids Public Museum, Grand Rapids Public Schools, Kendall College of Art and Design of Ferris State University (KCAD), Grand Valley State University, the City of Grand Rapids, and Downtown Grand Rapids, Inc.³⁴

Can a community collaboration create a truly innovative school that focuses on deeper learning?³⁵ The Public Museum School is a unique public school that uses a museum as a classroom. Practicing “place-based” education, literally using the local community as a textbook, the school curriculum also stresses design thinking which is a different approach to the problem-solving process. According to the school, design thinking:

- Values open exploration
- Allows for many possible answers
- Students learn from trial and error and creating prototypes
- Gives the student freedom to choose how they approach the problem

- Instills a desire to learn beyond the classroom
- Encourages students to bring their individual skills, experiences, and knowledge to the process.³⁶

The school’s concept resonates with others as well and was awarded \$10 million as part of a \$100 million contest sponsored by XQ: The Super School Project³⁷ to rethink high school.

The school will serve students in grades six through 12 and is a lottery, not a test-in, school. Currently grades six through eight are enrolled, and the school will add an additional class level per year. Consequently, no high school level results are obtainable as of yet.



Furr High School

Imagine students in a school that empowers them to tackle environmental injustice and become a green hub for its community. At Furr High School, students will become environmental-change agents, accelerate their academic growth and transform the comprehensive American high school.³⁸

“Nobody wanted to come here. It was called a throw-away school...”- Dr. Bertie Simmons, Principal

In 2013 at the age of 78 years, former Houston Assistant Superintendent Bertie Simmons agreed to come out of retirement “for a few months” to help turn around a struggling high school beset with gang violence. Now, four years later, she’s still there living what she terms, “the most exciting thing I’ve done in 50 years in education.” How is she doing?

The state of Texas graduated 89% of its students in 2015; the Houston Independent School District 82%. Furr High School with over slightly over 1,000 students is 98% minority and 83.4% economically disadvantaged. Despite a 24% mobility rate, the school graduated 94.7% of its students in 2015. Over 81% of these students also took the ACT or SAT in 2015 compared to the state average of 68% and though their scores were lower, they demonstrated substantial one-year gains.³⁹ What accounted for these differences?

Yet another XQ Prize winner, Furr has been undergoing a culture shift in which students take increasing responsibility for their own learning and what they want to learn.

As the XQ site notes, Furr will employ:

... a project- and place-based model grounded in the rigors of environmental and nutritional sciences. This large public high school will transform its culture with restorative justice, connect the dots between students and community, and combine Socratic seminars, university and business partnerships, and wrap-around services. Students and teachers will pair with their university counterparts to become “green ambassadors” in important environmental-sustainability research projects.⁴⁰

Yet, specific programs are merely indicators of what is a culture of high expectations at the school. A “Futures Academy” in the petroleum industry, for instance, will give students the opportunity to earn college credits and an industry certification by graduation. Perhaps even more compelling is “genius time.” Students can sign up for additional work on a variety of subjects in a variety of areas.



Loving High School

At Loving High School, every student matters and has the potential to succeed. Our vision is “to create an environment that challenges and develops students to succeed in life’s endeavors and compete in a global economy.”⁴¹

The town of Loving, New Mexico only has about 1,400 permanent residents of which about 141 are high school students. On the surface, Loving High School seems no different than any one of a number of conventional high schools that dot the New Mexican landscape. State test scores are average at best.

Yet, while offering conventional courses, Loving High School is a breakaway rural school that is creating deeper learning options and genuine career opportunities for its students. The fact that the school only earned a bronze medal in the *US News and World Report* High School Rankings ignores the fact that Noodle.com called Loving one of the 41st most innovative schools in the country in 2015.⁴²

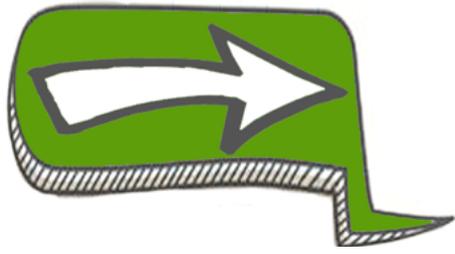
With 100% poverty, Loving graduates 96% of its students within six years, far above the state average of 70.8%, and over half go on to enroll in college in the state and three-quarters of those already have college credits.⁴³ How does Loving accomplish this? Loving offers:

An education that makes explicit the pathways between education and work — even in medium-tech but [high-demand fields](#), such as nursing and

construction — motivates and guides students toward career paths that, given the school's rural location and families' economic hardships, they might otherwise have found entirely out of reach.”⁴⁴

These programs are exemplary in their balance of academic and real world courses. In addition, the school offers AP (29% participate) and dual credit coursework, correspondence credit and early admission to the New Mexico State University (NMSU-C). The district also believes that “technology is now” and has implemented a one to one tablet program.

Loving High School exists in a small but tight-knit community. School administrators and teachers (all residents) understand how critical the success of their children is to themselves and their community. Perhaps most telling of this attitude is a quote posted on the district web site. “*Education is the great engine of personal development. It is through education that the daughter of a peasant can become a doctor, that the son of a mineworker can become the head of the mine, that the child of a farm workers can become the president of a nation.*” - Nelson Mandela



Clintondale High School⁴⁵

Our story is just like most schools. We were struggling to educate our at-risk students. We were asking our at-risk students to process our classroom information in environments that often times are not conducive for learning. Our committed staff, willing to try new approaches, began to assign classroom lectures for homework and have been working with the students on their homework in the classroom. – Clintondale High School⁴⁶

Can a “flipped” school, not just a classroom, lead to deeper learning outcomes? Faculty and staff at Detroit area’s Clintondale High School would argue so. By inverting, or switching, conventional instruction so that students view classroom lectures at home and, in essence, do their homework at school, Clintondale has created opportunities for collaborative learning groups and increased interaction with teachers. Teachers now serve more as resources and coaches than lecturers.

Starting in 2010 with the freshman class, Clintondale teachers found that they had “*reduced the failure rate by 33% in English Language Arts, 31% in Mathematics, 22% in Science and 19% in Social Studies in just one semester. In addition, (they had) seen a dramatic reduction of 66% in our total discipline for our freshman group.*”⁴⁷

Yet, as Alan November and Brian Mull (2012)⁴⁸ have pointed out upon reviewing Clintondale and other examples, the concept of flipped learning has been overly simplified in educational discussions. Looking at work by Dr. Eric Mazur of Harvard University, they describe Flipped Learning as opportunities for:

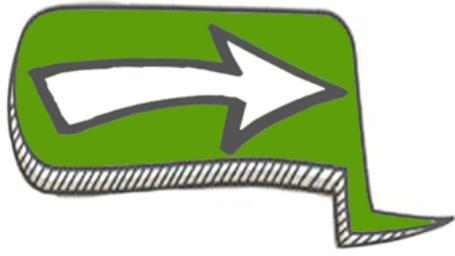
- Students (to) prepare for class by watching video, listening to podcasts, reading articles, or contemplating questions that access their prior knowledge.
- After accessing this content, students are asked to reflect upon what they have learned and organize questions and areas of confusion.
- Students then log in to a Facebook-like social tool, where they post their questions.
- The instructor sorts through these questions prior to class, organizes them, and develops class material and scenarios that address the various areas of confusion. The instructor does not prepare to teach material that the class already understands.
- In class, the instructor uses a Socratic method of teaching, where questions and problems are posed and students work together to answer the questions or solve the problems. The role of the instructor is to listen to conversations and engage with individuals and groups as needed.

One of the most important concepts in teaching is creating opportunities to make thinking visible.

When teachers can really see the thinking of their students, they can provide these students with the support and encouragement they need to be successful. We believe that by using the thoughtful approach to the Flipped Learning method described at the beginning of this article, teachers

*have an amazing opportunity to gain insights into where students are struggling.*⁴⁹

Have Cintondale's results held up? According to the most recent Michigan Report Card, with 78% economically disadvantaged, the school now graduates 93% of its students on time.⁵⁰



Conclusion

We define “deeper learning” as the process through which an individual becomes capable of taking what was learned in one situation and applying it to new situations (i.e., transfer).— National Research Council⁵¹

With ongoing calls from business and governmental decision-makers for students to have, and schools to teach, “21st Century Skills,” several national foundations requested that the National Research Council form a high-level committee to both define deeper learning and to look at the skills required to apply that learning in a global economy. Further, the committee was to look and the relationship of these new competencies to more traditional academics.⁵² Published in 2012., the committee’s report contained the deceptively simple definition above, and the additional clarification below:

We define deeper learning not as a product but as processing—both within individual minds and through social interactions in a community—and 21st century competencies as the learning outcomes of this processing in the form of transferable knowledge and skills that result. The transferable knowledge and skills encompass all three domains of competency: cognitive, intrapersonal, and interpersonal, in part reflecting the sociocultural perspective of learning as a process grounded in social relationships.⁵³

When one looks at “deeper learning” and the need for new competencies, is it fair to ask why are there not more schools that train students accordingly? Why is change resisted? Howard

Gardner, writing in 2011, addressed some of these issues. Ironically, after the 2016 election, his words seem even more relevant today. Here, they are quoted at length:

- *With some exceptions, educators and policymakers concerned with education, however well meaning, have not themselves had the opportunity to think much about education for a truly global era; and even if they have, their own education has rarely prepared them to undertake such education seriously and effectively.*
- *Despite scattered calls for 21st-century skills and knowledge, there is no deep desire for such innovative education on the part of most families, or most citizens. We have nearly all been to school, we think we know what it should be like, and school approaches appearing markedly different from the “known” rarely find a favorable response in the community. At most, innovations are tolerated as long as they lead to adequate performance on traditional measures.*
- *Even when there is both the desire and the policy for a 21st-century education, our assessments are almost all geared for classical subject matter knowledge and almost never offer the means to assess the flexible, cooperative thinking that is the hallmark of interdisciplinary thought.*

Perhaps most perniciously in the United States — but, alas, not only in the United States — there is a deep distrust of education that attempts to transcend borders and to take seriously the customs, values, and priorities of nations and regions very different from one’s own—and such provincialism and exceptionalism grows more fervent in times of crisis. Cosmopolitanism, internationalism, and globalism are often considered dangerous concepts or even “fighting words.”⁵⁴

What of the schools listed in this white paper? What have they done differently? To begin with, they all (particularly the US schools) appear to struggle to some degree with these impediments to change. For some, like Furr and Clintondale High Schools, results were so dismal that decision-makers were willing to try radically new concepts. Yet other schools, like Cortines, that seem to have every advantage can find themselves (in this case politics and district budget) facing impediments. All of these schools, to some degree were, and are, risk-takers. They challenge conventionality.

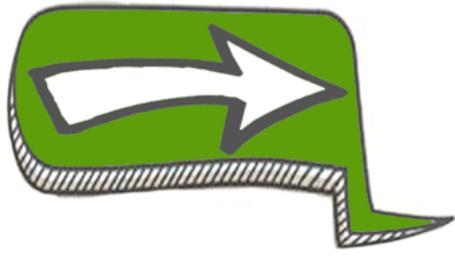
In concert with findings from the AIR study mentioned earlier, there are commonalities among these schools, though often differently approached. Project and/or placed-based learning is highly evident. Schools have direct employment, career and college-links and students are prepared to succeed in these domains. Viable community, or industry-based, partnerships figure

prominently. There is also, in the case of schools like Cortines, Ørestad, and the Public Museum School, the power of place. Above all, these schools are configured to do the work differently.

It will be noted that this paper cites demographics and results for several schools. These schools are very successful with minorities and impoverished students. Yet, a view of conventional measures, such as state proficiency scores, ACT, or AP pass rates often falls short, as Gardner notes above. Success is most clearly demonstrated by the summative measure of high school graduation.

When looking at deeper learning schools, one other caveat emerges from this survey. There is a danger that some will see such schools as being within the purview of college-bound or gifted students. Some do operate this way, but by and large the focus is on college and/or work. Loving High School is a good example. Here, deeper learning also serves to make “explicit” the pathways between education and work, not just to college, for kids in a low-wealth rural community. Policy makers focused on the pathway to higher education only, overlook the fact that immediate employment is often a necessity in rural and urban areas. Here, high school graduates are often expected to immediately go out and get a job to help support their families.

More ideas are available in *Innovation and Deeper Learning: Model High Schools Volume 2*.



End Notes

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- ¹ Mansilla, V. & Jackson, A. (2011). *Educating for Global Competence: Preparing our Youth to Engage the World*. Washington and New York: Council of Chief State School Officers and the Asia Society Partnership for Global Learning, p. x.
- ² Dillon, Sam (September 27, 2010). 4100 Students Prove “Small is Better’ Rule Wrong. The New York Times. Available at: <http://www.nytimes.com/2010/09/28/education/28school.html>
- ³ See Brockton High School 2016-17 Course of Study Guide at: http://www.brocktonpublicschools.com/uploaded/Schools/BrocktonHigh_School/CourseofStudyGuide2016-2017.pdf
- ⁴ These statistics are from the U.S. News High School Rankings at: <https://www.usnews.com/education/best-high-schools/massachusetts/districts/brockton/brockton-high-9323/student-body>
- ⁵ ICLE Program of the 25th Annual Model Schools Conference, Nashville, TN., June 25-28, 2017.
- ⁶ See: The Quest for Deeper Learning by Barbara Chow at: <http://www.hewlett.org/newsroom/the-quest-for-deeper-learning-by-barbara-chow/>
- ⁷ See An Overview of the Deeper Learning Network at: http://deeperlearning4all.org/wp-content/uploads/2011/11/Deeper-Learning-Overview_Final.pdf
- ⁸ Huberman, Op cit., p. 36.
- ⁹ Ibid, pp. 35-6
- ¹⁰ The Deeper Learning Network boasts up to 500 schools. By example, the member New Tech Network cites 15 Ohio schools, including the Buchtel Community Learning Centers in Akron. <http://akronschools.com/school/Buchtel+CLC+9-12> and <http://www.akronschools.com/school/Buchtel+CLC+7-8>
- ¹¹ See: <http://central-lausd-ca.schoolloop.com/grandarc>
- ¹² See: Grand Arts Student Learning Outcomes at: http://central-lausd-ca.schoolloop.com/grand_studets
- ¹³ See: Howard Blume (July 14, 2013). L.A.’s Cortines arts high school loses another principal, in the Los Angeles Times at: <http://articles.latimes.com/2013/jul/14/local/la-me-arts-high-20130715>
- ¹⁴ <https://oerestadgym.dk/in-english/>
- ¹⁵ See: About Ørestad Gymnasium at: <https://oerestadgym.dk/in-english/about-oerestad-gymnasium/>
- ¹⁶ See: <http://www.globalschoolsalliance.org/orestad-gymnasium>
- ¹⁷ <http://stevejobsschool.world/>
- ¹⁸ See: How to become a Steve Jobs School at: <http://stevejobsschool.world/education-professionals/>
- ¹⁹ <http://stevejobsschool.world/media-plaza/>
- ²⁰ <https://www.pcsb.org/clearwater-hs>
- ²¹ BLIS Academy of Business, Leadership, & International Studies (includes CAICC & ROTC); STEAM Academy of Science, Technology, Engineering, Aeronautics, & Mathematics; FAME Academy of Fine Arts & Media Education and SHARE Academy of Sports, Hospitality, and Recreational Education
- ²² See: You Tube Video at: <https://youtu.be/R-CgP9IuiKc>
- ²³ See: Washington Post Most Challenging High Schools at: <https://apps.washingtonpost.com/local/highschoolchallenge/schools/2016/list/florida-schools/>
- ²⁴ The school is unranked in US News 2017 Best High Schools
- ²⁵ See: <https://www.usnews.com/education/best-high-schools/florida/districts/pinellas/clearwater-high-school-5455>

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- ²⁶ Ranked 98th nationally by US News and World Report
- ²⁷ See: http://ucsdnews.ucsd.edu/pressrelease/newsweek_again_names_the_preuss_school_ucsd_the_nations_top_transformative
- ²⁸ See: California School Dashboard at: <https://www.caschooldashboard.org/#/Details/37683383731189/1/EquityReport>
- ²⁹ See AVID at: <https://www2.ed.gov/pubs/ToolsforSchools/avid.html>
- ³⁰ See: Key Elements for Success at: <http://preuss.ucsd.edu/about-preuss/preuss-at-a-glance.html>
- ³¹ See: Challenge-Based Learning at: <http://www.nycischool.org/index.php?c=7>
- ³² See: <https://www.usnews.com/education/best-high-schools/new-york/districts/new-york-city-public-schools/nyc-ischool-138176>
- ³³ <http://publicmuseumschool.org/>
- ³⁴ See: <http://publicmuseumschool.org/about/>
- ³⁵ For an interpretive video, go to: <https://youtu.be/EZ-BdkC2ZIM>
- ³⁶ See: Curriculum at <http://publicmuseumschool.org/curriculum/>
- ³⁷ See: <http://xqsuperschool.org/>
- ³⁸ <http://www.houstonisd.org/Page/79441>
- ³⁹ 1088 to 1123 on SAT; 14.9 to 15.7 on ACT. Source: School Report Card at: <http://www.houstonisd.org/domain/37208>
- ⁴⁰ See: Furr High School at: <http://xqsuperschool.org/abouttheproject>
- ⁴¹ http://www.lovingschools.com/High_School
- ⁴² See: The 41 Most Innovative K-12 Schools in the Country at: <https://www.noodle.com/articles/innovative-schools-2015#loving>
- ⁴³ Loving District Report Card at: http://webed.ped.state.nm.us/sites/conference/2016%20District%20Report%20Cards/021_LOVING_MUNICIPAL_SCHOOL_DRC2016_.pdf
- ⁴⁴ Op. cit. The 41.
- ⁴⁵ <http://www.flippedhighschool.com/>
- ⁴⁶ See: Our Story at: <http://www.flippedhighschool.com/ourstory.php>
- ⁴⁷ Ibid: Results
- ⁴⁸ See: Alan November and Brian Mull (2012). Flipped Learning: A Response To Five Common Criticisms, At: <http://novemberlearning.com/educational-resources-for-educators/teaching-and-learning-articles/flipped-learning-a-response-to-five-common-criticisms-article/>
- ⁴⁹ Ibid
- ⁵⁰ See: https://www.mischooldata.org/DistrictSchoolProfiles/ReportCard/AccountabilityScorecard2/AccountabilityScorecard2AdditionalFactors.aspx?Common_Locations=1-S,6472,1027,95&Common_LocationIncludeComparison=False
- ⁵¹ National Research Council. (2012). *Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century*. Committee on Defining Deeper Learning and 21st Century Skills, J.W. Pellegrino and M.L. Hilton, Editors. Board on Testing and Assessment and Board on Science Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press., p. 5.
- ⁵² Committee on Defining Deeper Learning and 21st Century Skills. The study was sponsored by Carnegie Corporation of New York, William & Flora Hewlett Foundation, John D. & Catherine T. MacArthur Foundation, National Science Foundation, Nellie Mae Education Foundation, Pearson Foundation, Raikes Foundation, SCE, and the Stupski Foundation.
- ⁵³ Ibid. p. 74.
- ⁵⁴ Mansilla, V. & Jackson, A. (2011), op. cit., p. x.