



21st Century Education and Strategic Planning in the Catalina Foothills School District

We are often asked to tell the story of our journey – from the establishment of the vision for 21st century education to the current day’s work focus. Over the years, this strategic priority has remained strong. The Catalina Foothills School District (CFSD) has been implementing a long-term systemic and systematic plan to bring the concept of 21st century teaching and learning to scale. Collectively, educators, students, parents, and the larger community contribute to the daily successes and opportunities that empower our students to think, create, lead, and make change.

Introduction

Let’s just get this out of the way: there is no shortcut to strategic planning and the related implementation processes when you want to scale up innovative educational practices. It takes years of sustained commitment. In CFSD we are ten years into this continuously evolving, deep-rooted work. It requires a crystal-clear focus on our purpose: ensuring that each student achieves intellectual and personal excellence, and is well prepared for college and career pathways.

Rather than chase the latest education trends, we have maintained an unrelenting commitment to improving our programs. We involve our teachers, reach out to community partners for engagement and guidance, and make sure that we deploy resources where they have the greatest impact on achieving our desired results. To be clear, our work is about large-scale implementation within an existing system of schools. We do not require our teachers to use a specific model(s) for teaching/learning. Nor do we require rigid pacing guides, calendars, and scripted curricula. We rely on our teachers and administrators to create rich learning experiences using the same important skills we are developing in our students: creativity and innovation, critical thinking, problem solving, collaboration, communication, systems thinking, flexibility, etc.

In the beginning

CFSD has now "worked" three strategic plans that have focused on 21st century skill building in the context of rigorous academic standards. We began this work in 2006 after a comprehensive strategic planning process identified 21st century learning as a priority for the district. The adoption of that plan was a formal commitment to pursue this work as a system. Leadership from the Partnership for 21st Century Skills (P21) provided initial guidance as we embarked on this journey.

Instead of adopting an existing framework or a generic list of skills, CFSD engaged the community in a process that led to a skill-set personalized to our place. An advisory committee of local business leaders, entrepreneurs, university professors, students, parents, and teachers considered the knowledge and skills that students will need to be successful within and beyond their PreK-12 educational experience. Their work initiated a focus on twelve 21st century skills as outcomes for all CFSD students. What followed was a long-term work plan to collaboratively build and align curriculum, instruction, and assessment to those skills. Over time, aspects of the original 21st century skills were merged, resulting in the current six skills, renamed as deep learning proficiencies (DLPs).



Digging deep

To prepare for the most recent strategic plan and provide a better understanding of high performing districts and their characteristics and actions, we utilized educational research, professional literature, and CFSD performance data to create a 233-page report entitled, "Reframing Catalina Foothills School District's System for Learning in the 21st Century." Taken in the aggregate, this research base and the analysis of the data over three years provided clear guidance on the actions the district could take to dramatically increase its effectiveness. The CFSD Governing Board engaged in a comprehensive study of the information and data in the report, and it was made available to the larger community on the district website. The "reframing" report included an analysis of the data received from CFSD parents, teachers, and administrators, who evaluated the impact of our work using a valid and reliable survey, Dimensions21.

"We asked all of our 5th to 12th grade students about their experience in CFSD schools and classrooms," said Dr. Kamerzell, the district's superintendent. "We wanted to know if they are genuinely interested in the topics they're studying and if they're highly motivated and committed to learning. It matters to us if our students are self-directed and persevere when challenged with complex topics."

Our key question: Is our students' learning deep and authentic? All students in grades 5-12 responded to survey items about their engagement in school, classroom conditions for engagement, and topics related to their school's culture and the learning environment.

"Student perspectives gave us some of the richest information about the current state of teaching at CFSD," observed Dr. Kamerzell. "We found that 73% of our students were highly attentive and committed to their studies. Students told us that learning in school was important to them, and that their teachers encourage them to succeed and help them develop challenging academic goals."

From our parent survey, we found strong support for the CFSD 21st learning agenda, including our seven (now six) skills. Most parents rated each skill “of critical importance” or “very important.”

Our staff survey results indicated they shared our vision for 21st century learning. Teachers agreed that our academic content was well-integrated with our 21st century skills. “It’s important that we provide opportunities for staff to build their capacity to advance their vision,” says Dr. Kamerzell. “Their feedback focused us on the most critical areas for development.” (Surveys Produce Guidance, *Desert Leaf*, September 2013)

Assessment data were another key source of data. We compared our results on the College and Work Readiness Assessment (CRWA+) with our goals of improving students’ skills in critical thinking, analytical reasoning, problem solving, and written communication. What did we find? “If ‘college ready’ is defined as having the same (or better) set of skills as students who are already in college, Catalina Foothills can be considered as having graduated students who are ‘college ready’,” reported Dr. Mary Jo Conery, Associate Superintendent. (CFSD Evaluates Itself, *Desert Leaf*, January 2014.) We were on the right track.

In addition to analyzing data about our own performance, we studied high performing school districts across the country. We reviewed the research literature about quality teaching and learning, support for district-wide systemic improvement, positive learning environments, and effective leadership. As we collected information, we continued to re-evaluate our goals. For example, fifteen years of college and career readiness research by Dr. David Conley, University of Oregon, influenced our objective about preparing students for college, careers, and civic life.

These results and a variety of other data sources influenced the outcomes of our strategic plan, now named *Envision21: Deep Learning*. The new plan, built on the work of our earlier plans, moves the district forward, focusing on goals and objectives related to achievement, transfer, college and career readiness, and deep learning, perpetuating our vision of 21st century learning.

Setting our goals

The current plan, *Envision21: Deep Learning*, sets out three worthy goals: 1) Reduce the gap between current and desired student academic achievement, 2) Raise the engagement of students so they are highly motivated to set and achieve increasingly challenging goals for deep learning, and 3) Partner with families and community to achieve our strategic priorities. Shared core values define the learning environment we intend to create, and a revised mission and vision communicate the district’s purpose and direction: preparation for college and career pathways and the transfer of knowledge and skills to life beyond CFSD.

“Our job is preparing students for whatever it is that they’re going to do beyond high school,” said Dr. Kamerzell. “If it’s going on to a college or university, admissions people are less concerned these days about GPAs and where a student ranks in a class, and more interested in the rigor of the coursework they took in high school.”





Once the governing board approved the final version of the strategic plan, it was time to figure out the nuts and bolts. Principals, teachers, and district administration developed the strategies of *how* we would achieve our goals. Given that the strategic plan must serve as a guide through 2020, we had to create robust systemic plans for the schools. The school improvement plans (SIPs) were created within the context of the district’s strategic plan. Each SIP defines the specific measurable actions that schools

will take to advance towards the results that we want to see over time. Each principal and school-based leadership team facilitated the development of a research-based SIP with achievable improvement goals, specific action plans tied to an annual timeline, and a monitoring component to gauge progress during the school year.

Envisioning deep learning


What does deep learning look like? Using resources such as those from the William and Flora Hewlett Foundation (2013), Partnership for 21st Century Learning (P21) (2010, 2014), Bellanca (Ed.) (2015), Fullan and Langworthy (2013), Conley (2007, 2014), Farrington (2013), and Wagner (2012), CFSD created its definition.

We identified four dimensions of deep learning as focus areas to achieve the district’s goals: 1) Academic Skills, 2) Deep Learning Proficiencies, 3) Learning How to Learn Skills, and 4) Academic Mindsets. Each dimension defines an aspect of deep learning. They have collectively become the focus of a system-wide effort to promote and create deep learning in our schools.

DEEP LEARNING IN THE CATALINA FOOTHILLS SCHOOL DISTRICT			
ACADEMIC SKILLS	DEEP LEARNING PROFICIENCIES	LEARNING HOW TO LEARN SKILLS	ACADEMIC MINDSETS
			
<p>Mastery of Rigorous Academic Content</p> <ul style="list-style-type: none"> Actively Participate in Learning Appropriate Level of Challenge Structure of Knowledge Foundational & Technical Knowledge and Skills Acquire, Apply, and Transfer Knowledge and Skills 	<p>Application of Deep Learning Proficiencies</p> <p>(5c + s = dlp)</p> <ul style="list-style-type: none"> Citizenship Creativity and Innovation Critical Thinking and Problem Solving Communication Collaboration Systems Thinking 	<p>Learning How to Learn</p> <p><i>Self-regulation and Ownership of Learning:</i></p> <ul style="list-style-type: none"> Planning & Goal-setting Self-instruction Help-seeking Collaborating Progress monitoring Reflection <p><i>Learning Techniques:</i></p> <ul style="list-style-type: none"> Time Management Study Skills 	<p>Developing Academic Mindsets</p> <p><i>Belonging</i></p> <p>I belong in this learning community.</p> <p><i>Growth</i></p> <p>My ability and competence grow with my effort.</p> <p><i>Self-efficacy</i></p> <p>I can succeed.</p> <p><i>Relevance</i></p> <p>This work has value and purpose for me.</p>
KNOWLEDGE AND SKILLS THAT TRANSFER TO COLLEGE, CAREERS, AND CIVIC LIFE			

The inclusion of the deep learning proficiencies (DLPs) reaffirmed the commitment to 21st century skill-building for all students. They are citizenship, critical thinking and problem solving, creativity and innovation, communication, collaboration, and systems thinking (5c + s = dlp). One significant change to the skill focus is the addition of citizenship. Data from parents indicated that more clarity was needed in the performance indicators of cultural competence. We merged it with citizenship and included cultural literacy as a performance area, along with global systems and perspectives, and civic literacy and engagement. The DLPs and the performance areas are shown below.

A set of rubrics was recreated so that teachers and students could gauge progress and assess the performance areas associated with each DLP at the K-2, 3-5, 6-8, and 9-12 grade spans. The rubrics provide a common vocabulary and illustrate a continuum of performance. By design, the rubrics have not been aligned to any specific subject area. They are to be contextualized within the academic content areas based on the selected performance area(s) and indicator(s) that will be taught and assessed. In practice, this means that not every performance area and indicator in each of the rubrics will be necessary in every lesson, unit, or assessment. As stated in our strategic plan, measuring these skills and reporting the results to students, parents, and the community remains a priority.



DEEP LEARNING • CFSD

CATALINA FoothILLS SCHOOL DISTRICT

Deep Learning Proficiencies (DLPs)

5c + s = dlp

Citizenship

- Cultural Literacy
- Civic Literacy and Engagement
- Self-regulation and Reflection

Critical Thinking and Problem Solving


- Information and Discovery
- Analysis and Interpretation
- Reasoning
- Problem Solving/Solution Finding
- Self-regulation and Reflection

Collaboration

- Leadership and Initiative
- Cooperation and Flexibility
- Responsibility and Productivity
- Responsiveness
- Self-regulation and Reflection

Creativity and Innovation

- Idea Generation
- Idea Design and Refinement
- Openness and Courage to Explore
- Work Creatively with Others
- Creative Production and Innovation
- Self-regulation and Reflection



Systems Thinking

- Interdependencies
- Consequences
- System-as-Cause
- Leverage Actions
- Identification and Explanation
- Representation
- Transfer
- Change Over Time
- Big Picture

Our Mission

Catalina Foothills School District, a caring and collaborative learning community, ensures that each student achieves intellectual and personal excellence, and is well prepared for college and career pathways.

Communication

- Engaging in Conversations and Discussions
- Using Digital Communication Tools
- Communicating in Diverse Environments
- Self-regulation and Reflection

Our Vision

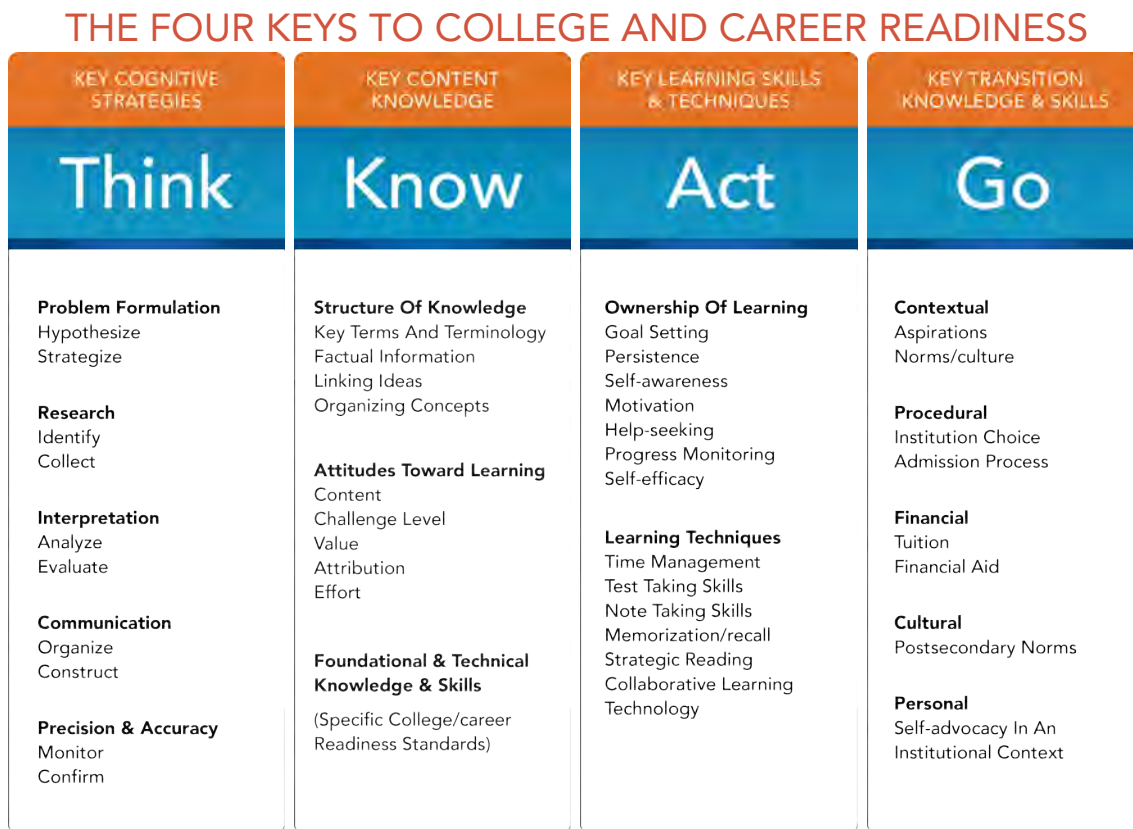
Learning transfers to life beyond the Catalina Foothills School District experience, enabling each student to flourish as a responsible citizen in the global community.

2014-2016-- Catalina Foothills School District

End goal: Creating graduates who soar

One of the objectives of the district’s *Envision21 – Deep Learning* strategic plan is preparing our students for college, careers, and civic life. We aim to educate our students so they are able to transfer their knowledge and skills to postsecondary education and career pathways after high school graduation. This preparation begins the moment each student enters our schools.

CFSD is using the extensive research of David T. Conley and his colleagues to provide an operational definition of college and career readiness. It is one that goes beyond course titles, grades, and test scores. The model, titled *The Four Keys to College and Career Readiness*, includes Key Cognitive Strategies (THINK), Key Content Knowledge (KNOW), Key Learning Skills and Techniques (ACT), and Key Transition Knowledge and Skills (GO). Although there are other factors that influence college and career readiness, the skills in this model can be most directly affected by schools.



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“All students aspire to enter the workforce eventually and, to do so, all of them will need a set of similar foundational thinking skills, content knowledge and learning strategies if they are to succeed in their careers and be productive members of society,” says CFSD superintendent, Dr. Kamerzell. “In CFSD we are committed to doing our part to make this happen.”

Is it indeed happening? The final goal of the CFSD strategic plan became clear: to foster strong relationships with and among CFSD alumni. We ask our graduates if they feel well prepared for their personal college and/or career pathways.

- Growth mindset

“My education at Catalina Foothills was absolutely invaluable at Hillsdale College and the University of Arizona James E. Rogers College of Law, says Jayme Weber, attorney. “People seem to want to talk about problem-solving and writing as talents that come from being smart, but those skills are developed through education--we're not simply born with them.”

- Work ethic, integrity

“What did I learn at Foothills?” asks graduate Colin Jones-Weinert, CES manager at SynCardia Systems. “Two key take-home messages: work ethic and integrity. I perform all functions with the utmost integrity, and have seen (and felt) the benefits of genuinely doing the right things, the right way.”

- Systems thinking, critical thinking

“I was fortunate to attend CFHS--and CFSD in general--during the nascent "systems thinking" program,” observes Tyler Kilian, director of IT operations at Tucson Electric Power. “Although the technology itself was simple by today's standards, we were able to explore complex systems in what was an innovative and ground-breaking manner. The fundamentals of this approach resonate in my career today where my staff routinely examines complex "systems of systems" problems. When I take a step back, the analogs are clear. My favorite days were those simulations.”

- Critical thinking, problem solving

“I credit my AP English course for critical and lateral thinking skills that have proven invaluable for me personally and professionally,” said Chris Marin, founder of startup company Convertist. “Years later, I find myself reflexively deconstructing every piece of art, advertisement, and business decision I face. Hardly a day goes by today that I don't construct a string of rhetorical syntheses in my head after reading something. I can't help but recognize the myriad logical fallacies and modes of persuasion that pervade every day existence. I still routinely ask myself: what could be done to make this point stronger, joke funnier, or art bolder? My teacher, Mark Rubin-Toles, taught his students to question everything and take nothing at face value. Embedded in his lessons was the takeaway that that no informed decision, or analysis, can be made without a healthy dose of skepticism.”

- Citizenship, self-regulation

Many of our alumni tell us that they discovered their passion for lifelong learning through the classroom practices of their CFSD teachers. “My faculty adviser for the Model UN club augmented my love of all things international, and pushed me to consider a career in Washington, D.C.,” says Natalie Fuchs. “I live here now, am pursuing a career I love, and was recently accepted to Georgetown for my Master's degree. My teachers supported every dream I had, always told me to just go for it, and they seemed to know before I did that things would turn out amazing.”

- Self-regulation, self-efficacy

“I would say that my experience at CFSD went a long way in preparing me for college,” said Ryan Sipos, class of 2014. “In college, you are completely in control of your own success. No one forces you to go to class, study, or do homework. No one is going to feed you or do your laundry. There is so much individual responsibility required to succeed in college, and I think that CFSD had a huge impact on the growth of my responsibility. I learned that being successful is ultimately in the hands of the students. Of course the teachers are there to provide guidance, but if the students aren't willing to put in the work, they won't succeed. I experienced failure and I experienced success, and I found that taking responsibility for my work and putting in effort resulted in better outcomes. Learning this lesson really helped me be prepared for the personal drive needed to succeed in college.”

There is no finish line . . .The journey continues

When the Catalina Foothills School District first began this journey, we committed to a long-term, comprehensive, and systemic improvement effort to prepare students well for their 21st century life. The 2014-2020 strategic plan focuses our system on the highest priority goals that will improve the outcomes produced by students. None of this work could be accomplished without coordinated and comprehensive curriculum, assessment, and professional development efforts that are multi-layered, multi-year. There is no finish line – just an optimistic willingness to continue the journey for the sake of our students and their future. With each strategic plan and the related implementation processes, dedicated professionals carry on the momentum from previous plans, embracing the opportunities and challenges that lay ahead.

“We are determined to create a learning environment in which each student achieves intellectual and personal excellence,” said Dr. Kamerzell. “The Catalina Foothills School District engages students in thinking deeply about complex issues. We have high expectations for achievement, and our students meet them. The vast majority of our students continue their education at the college and university level. We are proud that they are prepared well for what comes next in their lives.”

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