

It's the Kids!

*Forty Years of Innovations in
How We Educate Our Children*

A Career Memoir

Barbara Barnes

What people are saying about "It's the Kids!"

I had 7 more years left of my teaching career when I met Barbara Barnes and was introduced to EFG. She and her organization, along with Warrington Parker of Rockwell International and futurist Joel Barker, taught me to come out of my shell; think and teach outside the box; relate the present to the past and the future; work with students in new ways that showed them where their strengths were and gave them hope for their future; become a leader; work the system; and become a superb problem-solver. My last five years of teaching were the most rewarding, most difficult, and best of my 31 years in education.

In her book, Barbara returns time and again to the obstacles facing implementation of this new EFG curriculum and educational change, in general. The creative teachers in EFG quickly learned how to overcome or circumvent lack of funds; district, local, state, and union rules and regulations; reluctant teachers and administrators; and, finally, No Child Left Behind. We utilized partnerships, volunteers, in-kind contributions, donations, and other methods to accomplish our goals.

I learned from It's the Kids that Barbara was ahead of her time decades before I met her. She is still ahead of her time, and perhaps the time will never catch up with her! The areas with which I am familiar where Barbara had left other educators in the dust involve technology, partnerships, evaluation techniques, group learning activities, multi-age activities, community involvement, and funding, among others, all of which are referenced in numerous examples in her book.

And such a forward thinker, as well as the teachers who learn from her, will always find obstacles in front of her because so few people want to blow up the system and start over. It takes special teachers, administrators, and community partners to be able to say, yes, we are "required" to do such and so, but here are ways we can deal with that in a creative and effective manner. People who read this book hopefully can glean from it what we EFG-trained teachers know from experience—that there are ways that our students can lead us into the future if we only allow them the means to do so.

~Sue Rosenberg
Educator

"Barbara Barnes, one of the greatest leaders I have ever known, gives you a whirlwind tour of her life as a difference-maker in public education and, at the very same time, lays out a power-fulpositive pathway for the future of K-12 education. This is one great read!"

~Joel Barker, Futurist, Filmmaker, Author

"With this pathfinding work, Barbara Barnes has succinctly and persuasively tied together the various strands of modernization and reform in our public schools: corporate partnerships with the private sector, emphasis on creative and individualized student portfolios rather than standardized, multiple-choice testing, cross-age peer mentoring in K-8 "magnet"-type schools, emphasis on multi-cultural understanding, teacher pay and tenure based on periodic reviews of student performance, and collaborative local control over instructional methodologies and curriculum by teachers, parents, and principals.

And all this in a highly readable text of less than 150 pages! Definitely a book well worth reading and recommending to all those concerned about improving public education at ALL levels."

*~Carl E. Schwarz, Ph. D.
Professor of Political Science, University of California, Irvine*

"It's the Kids!" needs to be the textbook for education 101. For every school board member, elected official, parent, school administrator and teacher, this book is a must read. It has been an honor to know your work first hand. Throughout this career memoir, your focus, perseverance, passion and entrepreneur skills shout out to the reader... "Why are we not providing what works to prepare all students for the 21st Century when it is so clear with hundreds of examples of 'what works' is?" I kept reading faster and faster, because I could hear you talking with passion, seeing you pull files from your drawer and make phone calls to invite 'the world' to participate in an exceptional learning community...your school. And, they said 'You bet, when do we start?' ... and you said 'today!'"

This book must be read by all who care about the future of our country! Thank you, Barbara, for putting together such a true picture of real world education success."

~Judy Cunningham

Barbara, CONGRATULATIONS! You have hit all the right notes, and it is an easy read. I chuckled and applauded all the way through it.

~Mary Roosevelt

It's the Kids!
Forty Years of Innovations in How We Educate Our Children

A Career Memoir
by Barbara Barnes

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their behalf.

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Creative Storytellers
Publishers

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To find out more about The Progeny Foundation's work with endangered children, visit:

www.EndangeredChildren.org

*This book is in memory of my father who
told me I could do anything I wanted to in life,
and encouraged me to keep a sense of humor.*

*I also dedicate this book to my grandchildren
Shaun, Tom, Cameron and Sara, who will
be learning for the rest of their lives.*

*And with appreciation to my three sons
who endured life with a school principal.*

Thank you to the professional friends who helped me edit this book:

*Sally Snyder, Bob Polkinghorn, Sue Rosenberg, Leslie Bannier,
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*“Education is what remains after one has
forgotten what one has learned in school.”*

~Albert Einstein

Prologue

“There is nothing so unequal as the equal treatment of unequals.”
—Dr. Paul F Brandwein

There are two reasons why I decided to write this career memoir. First, it gave me an opportunity to showcase the future-focused leaders, innovative educators, and outstanding private-sector partners that I’ve had the good fortune to work with during my forty-year career as an educator. During those years, I witnessed my fair share of the detrimental effects of union rules and various other barriers to change, and encountered a number of duds in the system. In most cases, however, they did not really affect the educational outcomes, or destroy the emphasis on excellence.

Second, it would provide a vehicle to share my serious concerns about the state of the educational establishment today. We are bombarded by passionate discussion and concern for the working conditions of adults, bureaucratic regulation, budgetary shortfalls, and union controls; yet few mention students or show adequate concern about children’s preparation for life, work, and citizenship in the 21st century.

I chose to title this book *It’s The Kids! – 40 Years of Innovations in How We Educate Our Children* because it features real-life examples of some truly dedicated educators, school administrators, parents, and partners who have collaborated effectively to improve student learning during the last four decades. They were all motivated to improve learning using the latest technological tools available at the time, and to refine the very best resources in order to revitalize schools.

The educational programs described in this book put kids first! One of the schools I mention—21st Century Prep—was a magnet for K-12 students. It's my hope that we can learn from this school and others with similar standards to create *2030 Prep Learning Programs, Projects, and Schools*. Why 2030? That is the year that today's kindergartners may or may not graduate from high school, depending on the education system's ability to motivate them to learn and succeed. The United States today has an average graduation rate of only 50%. This book is intended therefore as a sort of "back to the future" discussion featuring examples from real life, and the innovative people who know that placing students first improves, restructures, and transforms schooling and educational standards in general.

This book is also the result of my work over many years for and with public, private, charter, parochial, and home schools across the United States and abroad. I was a teacher for 10 years; a school principal for 17 years; a business/education partnership director; a consultant in 23 states and 5 countries; an educational coach; a defendant in court cases that sought to dismiss incompetent teachers; and a foundation president. And my private-sector partnerships range from a small business in a local community to large corporations and organizations.

One school where I served as principal was on the Camp Pendleton Marine Corps Base in Southern California. A number of our programs operated outside the school day and year, and some were faith-based initiatives. I will share what worked, what endured, and what failed because of "bureaucratization". In my experience, innovation stops where bureaucracy begins, especially when unions take charge. Some "leaders" have been identified by name; others will recognize themselves in the narrative. I encourage those people and anyone concerned to voice their opinions or to make comments on my website at www.itsthekids.org.

My career as an educator began in 1958 as a 2nd Grade teacher at an inner city school in Decatur, Illinois. I continue today as a volunteer coordinator of an after-school tutoring program operated from the San Clemente Presbyterian Church in California, and as Founder and President of It's

Your Environment, Inc., a non-profit online community where students post ecological investigations, environmental service projects, and raise money for field studies and extending the classroom into their local community.

In 1959, I took a short leave of absence until my youngest son entered kindergarten. Then, in 1967, I accepted a position as a teacher and ultimately as a reading specialist, special education teacher, and grant coordinator in Cupertino, California. I was encouraged to get my master's degree with a credential in Educational Administration, and ultimately became one of two women principals in a school district with 42 schools. Due to a decrease in enrollment, the district decided to close some of its schools. As a first-year principal, I thought my administrative career was over, but I kept my job while other administrators—some with 20 years of experience—were reassigned to the classroom. They sued the district claiming seniority but lost, leaving my job, thankfully, intact. However, more schools were closed the following year and I decided to move to a district that was growing and had a more positive vision of the future. In 1975, I moved to Irvine, California, where I became principal of Vista Verde, a K-8 year-round calendar school.

In this book, I have featured numerous innovative educational experiences, and have identified the student achievement in each example. These are complex yet common-sense approaches to ensure a high level of student learning. The eight chapters in this memoir begin in Irvine but they all identify exceptional leadership, teacher professionalism, investigative real-world learning, portfolio assessments, integrated technologies, extensive parent involvement, and school choice, as well as numerous private-sector partnerships.

Some who read this book may say these methods and ideas may have worked in the past but can't be employed today because of negotiated contracts, pre-existing mandates, special-interest groups, curriculum frameworks, standardized testing, and state and national regulations governing the "business" of school. Others may say, "That may have worked for those kids but not the kids in my classroom, school or district." But the examples in

this book represent EVERY culture, socio-economic condition, and learning ability. The “business” of school is to educate ALL students with the skills for life, work and citizenship in the 21st Century. Our “business” today is failing many students and therefore future generations.

We are at a crossroads, especially in America. Liberty and freedom require an educated population. Hopefully, the examples and the message in this book will cause people to think differently, and design better educational offerings. It's the kids and ultimately their way of life that are at risk!



One

Vista Verde K8 School Irvine, California

“In order to stay small and lean, organizations must find ways to develop partnerships with those who can supply what they cannot.”

— Sally Helgesen, *“The Web of Inclusion”*

I arrived in Irvine in July of 1975. Working in Irvine Unified School District was an enormously challenging and rewarding experience due in great part to the visionary leadership of its founding superintendent, A. Stanley Corey. This remarkable man established a culture of excellence; an organizational structure based on school choice; multiple learning environments for students; extensive parental involvement; and partnerships with business and the community. Vista Verde was one of two schools on a 45/15 day year-round calendar: students attended school 45 days and then had a 15 day vacation. Or they could extend their school year by attending 10 of those 15 days in our “Intersession” based on careers, the arts, and an outdoor education camp. We were one of only two year-round schools. “Basics” schools and schools addressing the neighborhood’s needs were available. All were expected to meet the specific needs of each and every child.

The student population came from the entire school district. Many parents chose the year-round calendar because of their work or family commitments, and Vista Verde was the only kindergarten through 8th grade school in the district. They also made the choice to place their students in a small 6th – 8th grade junior high. This was before the concept of “middle school” had originated. In other words, it really was about the kids!

Parent choice is powerful when it comes to educational transformation spawning personalized learning programs for students because of

the increased hands-on involvement by parents. The teachers and assistants at Vista Verde were a diverse group of educators who worked as a team to improve instructional strategies to better meet the needs of students, and welcomed parents into the classroom, listening to their concerns. Did they all have differing viewpoints and even disagree on some issues? Of course! Yet they were able to debate various ideas and arrive at solutions based on what was best for the kids. A number of these teachers assumed leadership roles matching curriculum development and evaluation strategies to students needs.

Many of the teachers taught different grade levels during our "Inter-session" so they could better know the entire student population. Each year a camp was rented and a program developed that was a continuation of school subjects, with classroom instruction incorporating science in the outdoors. Other teachers gave up personal time to produce an annual student musical that was attended by the entire community. All of this took planning and time, and was a concern to the union. On several occasions the teachers were told to limit planning and be out of the building by a specific time. But the Vista Verde staff ignored these dictates. One day, after hearing several complaints from the union, I made an all-school announcement saying it was time for the teachers to leave the building. They all left their classrooms, walked through the front office, said goodbye, went out the front door, circled the building and entered the school by the back door. Their reasoning at the time was, "We left the building at the required time."

Those teachers did not let union-negotiated regulations interfere with their jobs. Their collaborative efforts to improve instructional practices and develop advanced learning opportunities for kids was more important to them than anything, and they were not going to be dissuaded by unions or bureaucrats.

During my time at Vista Verde, I was approached by a CNN producer asking to use our school in a documentary the cable network was making about year round-schools. I said I would check with the teachers and parents to see if they would agree to participate. This surprised the producer who

remarked, "You're the principal. Why can't you decide?" I responded, "We are all involved in decision making at this school."

After consulting with the staff and school site council, we all agreed to participate. The film crew arrived, and many of our teachers, students and parents were interviewed, and described how year-round education provided continuous learning with little need for review when the next session began. They explained how they liked "Intercession" because it extended the classroom into the real world, provided hands-on learning opportunities for the students, and provided additional days of instruction. They loved the calendar because it effectively met the various vacation needs of staff, parents and students. Since the school was a "choice", we continually had a waiting list of parents from across the district wanting to enroll their students. We waited excitedly to view the documentary and were appalled when it aired with the title: "F is for Education."

CNN's documentary featured a number of schools where the year-round calendar was not working and parents were protesting, and was produced to portray Vista Verde's year-round calendar as an exception. However, the producers chose to emphasize schools with outdated calendars based on the agricultural age when students worked in the fields in the summer. They had failed to tell me in advance the title of the documentary or the role our school would play in the overall message. In the last segment, the film did finally portray Vista Verde as an exceptional school—and we were redeemed to some extent.

Vista Verde modified its structures and calendars to represent the world today and that of the future. The school's kids understood the connection between school and how their education would affect the rest of their lives. Upon reviewing the curriculum, teachers and parents collectively determined that we had a very poor science program, and we all proceeded to find a way to improve it. By good fortune, I met Dr. Paul Brandwein, noted scientist and author of more than 55 books. Dr. Brandwein agreed to "consult" with our school at no charge to the district or to the school. At the time he was authoring a textbook series entitled *Science and Technology*, and we had

the opportunity to pilot the texts at every grade level. The students heard him personally present scientific principles in their classrooms, and we were thrilled to testify regarding the students' success in using these books at the California State Textbook adoption hearings. But the adoption committee refused to include this series on the California State school adoption list saying in part: "These books are too far ahead of their time—he should bring them back in five years and we'll consider them again at that time," or "science and technology do not go together; they should not be in the same book." Undeterred, we moved ahead, applying for a waiver to continue using these textbooks and further obtained a grant to purchase the first computer lab in the school district. The following year we were identified as the Outstanding Science and Technology School in the State of California. Dr. Brandwein was to continue working with Vista Verde for several more years.

We listened to parent concerns, found help from an expert in the private sector, adopted new, state-of-the-art learning materials that did not have state approval, wrote grants to obtain the appropriate technologies, and demonstrated a high level of student learning.

I mentioned that we were the first school in the district to have a computer lab. This was before we had all of the sophisticated software programs we have today. A fourth grade teacher decided if he could teach keyboard skills to his students, they would ultimately write better reports. He kept track of his students' progress and demonstrated significantly improved writing skills. The computers also increased the students' motivation to write. Science and English were combined in the middle school. Students would conduct a scientific investigation and write about it in English, using the computer lab. These integrated, technology-based learning options seem obvious today, but bear in mind, this took place in the late 1970's. Irvine School District became noted for its computer-assisted instruction.

During this time, I ordered a laser printer. We had a decentralized budget and I, as the principal, had discretionary funds for what was state-of-the-art technology at that time. The purchase of the printer needed school board approval, and one board member berated the principal, claiming

"there is no reason a school needs a laser printer." I identified myself as the principal in question and stated we would find a grant or partner to get the tool, which we did.

I remember vividly a first grade teacher who discovered that two thirds of her class spoke only Japanese, and decided that all of her students would speak English AND Japanese. She enlisted help from Japanese parents, labeled the entire room in both languages, and by the end of the year students could communicate using both dialects. This resulted in our school being recommended in Japan to parents moving to Irvine to work in Japanese corporations. Vista Verde benefited significantly from the multi-cultural population and the partnerships with these companies. Since we did not get extra funding for these students, I wrote a letter to the chief executive officers of various corporations suggesting they might want to donate to the school. As you can imagine, Toshiba, Canon, Ricoh, and similar corporations were so pleased with the education their Japanese students were receiving, they gave generous in-kind donations. Another principal asked me, "Who gave permission for you to write the letter?" I responded: "No one."

We increased our chances of getting tools necessary for student learning by asking for it.

I will never forget the ceremony of the copier. It was at the end of the school year and the eighth grade students had come to my office saying they wanted to throw a pie in the face of their favorite teacher! They planned to do it at graduation, and they needed my help. I told them, "You can't do this at the graduation ceremony at the Marriott Hotel. This is a serious occasion!" But knowing my students, and that they were going to do it at some stage, I agreed to call an outdoor assembly of the middle school students. Unfortunately, this was on the same day that a copier donated by Ricoh was to be presented. The assembly came off as planned, and the hired "pie-thrower" showed up and promptly delivered the whipped cream pie onto the face of the astonished teacher who, realizing I was a willing participant in the fake assembly, took the pie off his face and smeared it on mine. I returned to the office, with whipped cream in my hair and all over my clothes only to

be greeted by the Japanese executives from Ricoh, dressed in impeccable suits, with a news reporter in tow. About the same time, a mother dressed as a clown ran through the school office on her way to the first grade party. I'm sure those poor executives thought, "This principal needs more than a copier!"

A few years later, while traveling in Japan, I had lunch with eight of our students' mothers. Most of them had stayed in Irvine for about two years, while their husbands worked at local Japanese corporations, and their children enjoyed the "American experience". They all told me their sons and daughters had assimilated back into the Japanese education system very well and their English proficiency helped them immensely. The mothers were pleased to be back in Japan but did miss the large refrigerator and car they had in Irvine. They assured me they told their friends, "If you move to Orange County, you must enroll your children at Vista Verde."

Another fun project was created by our school nurse, Sally Snyder. She designed a school-wide health exploration model entitled "2010 Health Odyssey" to help the students develop good mental and physical health habits. Those participating in the "Odyssey" were challenged to become aware of their present state of health as it related to their chosen topic, to collect information about that topic, project their life into the year 2010, and formulate a plan for their optimum health lifestyle. Topics included diet, nutrition, physical fitness, avoidance of major health problems, dental health, the brain, artificial hearts, social problems and stress reduction. Teachers worked with multi-age groups to select a topic for investigation. One group of 4th and 5th grade students studied the effects of sugar on the brain together with some college students in a University of California, Irvine laboratory. Another group of students went to a senior citizen center and asked the residents: "What do you wish you had done to have better health than you have today?" All their investigations were presented and documented. One teacher coordinated the video taping of all student presentations while another teacher photographed special events. This was long before the advent of the Internet! The partners for this project included University of California,

Irvine, senior citizen centers, dentists, doctors, hospitals, sports centers, local police, accident investigators, paramedics, and health insurance companies. Our nurse recalls: "ALL of the students were actively involved and engaged, and one young man that was not particularly interested in school became very conscientious and concerned that he provide the younger elementary students with correct information when he 'taught' them about not using drugs—atypical behavior for this middle school student!." Parental permission was provided for the students investigating social problems. I personally wonder if these students remember this project now, in 2011, but my bet is they do. When we see these adults today, they always comment on how much they learned at Vista Verde.

Each teacher taught a combination class, working with multi-age students across two or more grade levels. Older and younger students worked together to master skills, and students could advance based on content knowledge and ability. In other schools, a combination class resulted in parents' complaints. At Vista Verde, parents were distressed if their child was not in a multi-age classroom.

The strong staff component developed at Vista Verde led to a transfer of an itinerant teacher to full-time assignment at my school. Itinerant meant that the teacher taught at several schools and traveled between them during the week. This tenured teacher had received "good" evaluations but was moved to different schools every year. I immediately began having concerns about classroom control and student achievement. I asked a district administrator to clarify the previous satisfactory evaluations for this person and followed up with, "Would you want your child in this classroom?" The response was, "No!" I heard from one parent that his son had received a grade from the teacher when the child had not even taken that class, and another parent reported to me that his child was in the class and did not get a grade. When I asked the teacher to produce the grade book, it was "at home." The grade book was returned to school a few days later in perfect condition but in my experience grade books usually had coffee stains, erasures, and multiple colors of ink. On further investigation, and on checking student

schedules, year-round calendar attendance, and excused illness records, I found over 400 falsified grades. I spent two years documenting performance in the classroom, meeting to develop improvement plans, counseling to encourage a leave of absence, meeting with the lawyers from the county council, and testifying in depositions and hearings. More charges were brought. This was a frustrating time for me because the entire dismissal process for this tenured teacher took almost three years—time that I could have spent doing productive work with competent teachers and students who were eager to learn. The errant teacher was finally dismissed. While I had determined that the incompetent teacher needed to be removed, the lengthy process was typical, and is in my opinion completely unacceptable.

Vista Verde benefited from a terrific partnership with the Marriott Hotel. Our students could find Marriott Hotels on a world map (geography); compare registration rates with other hotels in the city (math); understand fire prevention in a hotel and the way the computers turned off the elevators (technology); investigate the menus in the hotel restaurants and the special food related to health issues of the guests (science); and identify future careers in the hotel and tourist industry. Various Marriott executives volunteered to lead these discussions. As a result, our students sang carols at the hotel during the Christmas season, and exhibited their art in the hallways of the hotel conference center. The student council met in the hotel dining room to plan school year events, and 8th grade graduation ceremonies were held at the hotel at no cost to the parents or the school. This private-sector partnership, designed to provide real-world learning opportunities for our students, was the first of many in the school district.

Education is really about the kids. As a principal, I had no experience with middle school when I came to Vista Verde. There was one 8th grade boy who was a good but non-conforming kid. As a result he was sent to my office on many occasions. We had numerous chats and plans of action to address his teachers' concerns. I would say: "School is preparing you for your future. . .", "You need to learn this now so you can be successful in high school and college. . .", "You want to get a job someday, don't you?" and so on.

Many years later, I was in a department store and a man came up to me and said, "Mrs. Barnes, do you remember me?" I must have had a blank look on my face, so he told me his name (he was that boy) and said, "I was going up the escalator when I saw you down here, and I just had to come tell you that I graduated from UCLA, I have a great job and a nice girlfriend. I thought you would like to know that." He made my day!

Another student was in 1st grade when I came to the school. She went on to become a teacher, volunteered to help at the 2nd EFG Conference (see chapter four) and is now a school principal.

Vista Verde continues to be a high-achieving school with a truly dedicated staff, and even those who have retired or graduated continue to stay in touch and attend reunions.



*“An educational system isn’t worth a great deal
if it teaches young people how to make a living
but doesn’t teach them how to make a life.”*

~Author Unknown

Two

Private-Sector Partnerships

"The day of partnership is upon us. Leaders who learn to work with other social sector organizations, corporations and government agencies will achieve new energy, new impact and new significance in their organization's work."

—Peter Drucker

As a result of the Vista Verde partnership with the Irvine Marriott Hotel, I attended the first National Association of Partners in Education Conference in Washington DC. This organization was formed to respond to President Reagan's Private-Sector Initiative Act and included educators and business leaders from across the United States. The organization formed collaborations between private and public sectors to significantly improve learning and teach students skills for life. When I returned from the conference with many ideas for schools in Irvine, I became the Director of Business Partnerships for the entire district, in addition to my job as principal of Vista Verde. This provided an opportunity for me to interact with corporate leaders and hear their concerns about education and student achievement. It also provided many resources for the schools in Irvine.

The goal of this collaboration was to create a major business partner for every school. It turned into many partners for some schools and a few for others with every partner providing valuable resources and in-kind donations. The success of these partnerships was based on the entrepreneurial skills of the principal. Some viewed their jobs as fulfilling the requirements set down by the district, state and nation using the government resources that were provided. Others viewed the role of the principal the same way I viewed it. "If it needs to be done, find a partner who can help."

These partnerships provided an opportunity for students to shadow

employees at work to learn the career skills necessary for particular jobs.

A group of high school students was invited to attend a working lunch with Fluor Corporation executives and engineers. They discussed the latest construction projects Fluor was undertaking around the world, participated in a cost analysis and discussed the languages, currencies and customs in that part of the world. In another partnership, a bank set up a mini-bank at the school. It operated one day per week and students could open savings accounts. Bank personnel spoke in math class to explain interest rate, mortgages, sales tax, savings and investments. They also offered incentives for students to save a portion of the money they earned from chores at home. A stock brokerage firm taught an economics class to middle school students and taught the class how to form and conduct their own corporation. The firm also recognized a high achieving student with a scholarship grant. Representing the medical field, doctors and dentists served in an advisory capacity for school nurses. They were available for on-call advice about contagious diseases, accidents or other health issues. They also collaborated to provide free health service to low income families.

Students at a middle school plotted strategies to save the county from clogged roads and polluted air by designing a balanced, growing community. The history, science and social science classes formed teams of students to discuss land development, environmental issues, government, transportation, and community needs. Each team used county maps to perform various tasks, such as planning freeway routes, transit lines, bike trails, housing areas, business parks and airports. Activities included participating in a community planning exercise and attending transportation exhibits. Each team presented its recommendations. The program was sponsored by the county transportation commission, a county transit district, a transportation corridor agency, and an environmental management agency, all of whom had the same concerns as the students.

Individual partners mentored students, conducted job shadowing at their work, and shared career information in the classrooms. A renowned person fits into this category. I was president of the Irvine Unified School

District Administrators Association when I learned that John Wooden was related to one of the principals. Coach Wooden was invited to one of our meetings where he shared his now famous *Pyramid of Success—Building Blocks for a Better Life*, developed when he was the basketball coach at the University of California, Los Angeles. With him, it was not about the sport, but about the kids. Or in this case, the young men who would leave the school to live productive lives. Yes, a number of them became professional basketball players. But many more remember Coach Wooden for what he did to help them be successful in life. This was a good message for principals.

Fundraising projects went both ways. Business partners contributed to needs at the school by donating equipment or money to support programs. Vista Verde students collected pennies for the Orange County Performing Arts Center under construction in Costa Mesa. Students collected over \$500 and they were invited to hear a symphony concert at the Center after it opened.

The Irvine Company was a major partner with the school district. Their planned community design, with new neighborhood schools in each village, resulted in a small town evolving quickly into a large city. One of the technology innovations at the time was a community television station. This was used for regular programming and community announcements. I decided that Vista Verde students needed to learn about television production and, with the help of the school librarian, we launched "School Talk". This program was produced and filmed by middle school students and we broadcast "live" to the local community each week. I interviewed educators and business partners sharing the advanced programs that made the Irvine schools outstanding. Our studio was in a corner of the library, in an open-space school. I will never forget my interview with the Director of Health Services for the school district. Unfortunately, two side doors of the school were left open. My guest was in the middle of a sentence when she said, "There goes a squirrel!" The cameraman (an 11 year old boy) immediately turned the camera on the squirrel scampering through the building. It took a few minutes to stop laughing and get the program back on track. That

was "live" TV at it's best! Fortunately, the station did not shut us down, and "School Talk" continued for several years. Many students learned advanced technology and communication skills from this hands-on experience.

Corporations were very generous. Ricoh gave Vista Verde a new copier and Toshiba gave another school an entire computer lab. This last donation was arranged at a lunch that I had with a Toshiba executive. The partnership was then turned over to the school to coordinate. I knew the computers were delivered and hoped that the school had utilized the offer Toshiba made to train the teachers at no cost to the school. Unfortunately, I needed to intercede. The following spring Toshiba contacted me to say they were pulling the computers out of the school at the end of the school year. When I asked, "why?" I was told, "Toshiba has not been contacted by the school." They were not thanked and they were not asked to train the teachers so they assumed that the computers were not being used. I immediately called the school and spoke to the secretary who put me through to a teacher who was appalled. This teacher was using the computers every day and did not know that Toshiba had not been thanked or that he and other teachers could be trained. The computers stayed at the school and the following year the corporation made the same donation to another school. The 2nd school asked for and received teacher training, invited the CEO to visit the school to see the students at work using the technology, and sent a school-wide "Thank You" card, created on a computer and signed by the students. That school continued to receive donations from Toshiba for several years. The school that received the first computer lab did not.

After attending many National Association of Partners in Education conferences and continually learning about the value of private/public collaborations, I joined the International Partnership Network. This was an international spin off of NAPE and included corporations and educators from around the world. It was a great venue for sharing the things that worked in other countries. I came home from one of those meetings and was called by a district administrator asking me to provide a school district tour for a man visiting from the Soviet Union. Having been away for a few days and not being

able to speak Russian, I declined. I was told I could not decline. So I met the Russian representative. While we were touring he told me about "a message of peace to the world". This message would be in the form of a Space Bridge. Keep in mind, this was in the early 1980s. The World Philharmonic Orchestra would play Beethoven's 9th Symphony in Montreal while choirs in Geneva, Moscow, London and New York would sing Ode to Joy simultaneously by satellite. I was too uninformed to know it could not be done technologically. I also did not know the visitor had just been released from a Soviet jail by Mikhail Gorbachev. We decided we wanted our school district to be involved. However, we needed a satellite dish—a very large satellite dish! I found a partner who donated it and had it installed at the district office. When the superintendent asked if I was aware that a state permit was necessary for a satellite dish to be installed at any educational facility, I said, "no!" He said he would inquire in a few weeks to determine if in fact a permit was required. He probably knew this was a "hair-brained" idea but he was willing to take a risk.

All set to view the broadcast, I then received a call from a movie producer who met the Russian when they were both in the Soviet Union. He wanted our students to participate by being a part of the broadcast. That required another satellite dish on top of a truck. A church called me to say they had planned a mission trip to the Soviet Union and it had not worked out. They would use their funds to pay for the "truck" dish if they could attend. We emptied the district office of furniture and brought in partner "donated" large screen TVs so everyone could view. You can probably tell, by this time I was way out on a limb. I was breaking the state construction law, irritating the custodians who had to move furniture, involving many students who would be using this technological breakthrough to present messages of peace to the world, and assuring the school board members that everything would "come off" as planned.

It worked. After the World Philharmonic and choirs finished, our students popped up on the TV screen and presented their views on peace, after which our high school orchestra played two musical pieces. The

students contributed to a world-wide technological "experiment". When it was done, the Space Bridge planners said that up until five minutes before the broadcast they were convinced it would NOT work. Over 15 years later, I viewed a similar Space Bridge at half time at a National League football game. It was featured as a "new" technology, never done before. At the time, our students understood they were part of the new age in technology. They are certainly living and working in that age now!

Another expansive partnership project had fewer options for failure and great opportunities to improve learning for students. The Irvine Science Alliance, a formalized group of Orange County science based companies, provided assistance to school administrators, teachers, and students. They provided science experts, field trip opportunities, technology training, classroom speakers, student mentors, judges for science fairs, and advanced labs for student research. Students learned the latest scientific innovations and mastered skills necessary for careers in the science related industries. More importantly, this organization, working with Dr. Terman, the district science director, and the school science departments, increased student interest in science and math. In return the companies were preparing a future workforce with the skills necessary for advanced science careers.

During this time, the University of California Irvine Partnership was formed to connect the university departments with the community and K-12 education. Many valuable partnerships were formed through this network connecting university departments with schools and the business community. Examples include K-12 students working with college students in science and language departments, professional development programs coordinated with pre-service teachers and mentor teachers, and comparing assessment strategies at all levels.

The ultimate goal of partnerships is to prepare students with skills for life, work and citizenship in the 21st century. Partners connect classroom learning to the real world. All of these partnerships emphasized math, science and technology because these skills are necessary for the future workforce. The breakthrough happens when educators understand that partnerships

are a two-way street. There must be something “in it” for both parties and it must benefit the kids. The partner may be helping a school or student because of community spirit, or they may want a tax write-off for their donations. The company may want recognition to use in marketing; or they may want to better prepare future employees; or they might want to motivate their employees to help others. The first priority for the school is to say: “How can we work together to improve education and increase student achievement and motivation to learn?” The last priority is to say “Thank You!”

Partnerships continue to play a major role in forward-thinking schools and districts who want students to connect classroom learning to the real world and develop skills for future careers.



*"Much education today is monumentally ineffective.
All too often we are giving young people cut flowers
when we should be teaching them to grow their own plants."*

~John W. Gardner

Three

Transformation Initiatives

“Even if you are on the right track, if you just sit still you will get run over.”
—Will Rogers

In the 1990s, a “breakthrough” of a school or district change was called school improvement, restructuring, reforming, or transforming. More recently it has been called reinventing. I prefer to say *It’s the Kids* because it is about changing schools to ensure their success now and in the future. We must conduct a complete overhaul of the education system if we want our country to be a leader of nations, and our students to be prepared to live and work in a rapidly changing, technology-driven world. These examples were about changing paradigms before “paradigms” was a frequently used word.

THE ROLE OF THE PRINCIPAL

Another Irvine administrator, Judy Cunningham, and I met a group that was developing a computer software program to help people identify their personal work preferences and compare it to their view of their jobs. This new software concept was being developed in 1987 for corporations and companies and was way ahead of its time—a breakthrough in leadership training. We convinced the John Thomas Group to let us try their software with the Irvine administrators. We found principals who were completely “matched” to their job requirements and others who had to significantly adapt their behaviors to fulfill the job description. The latter liked their jobs, and most were doing outstanding work. However, they were under significant stress. As a result of this “experiment”, Judy and I formed “Managing Excellence in Education” to conduct an educational leadership study titled

100 Perspectives on the Principal's Role in California. This study was underwritten by Pacific Telesis Foundation. The objectives of this study were five-fold:

1. Assess the extent to which administrators' personal preferences and styles mesh with the requirements of the job.
2. Profile the work environment and its impact on school and district performance.
3. Strengthen administrators' abilities to define and solve any performance problems in implementing educational reforms.
4. Develop a team approach in school and district leadership.
5. Improve interviewing skills to identify persons who will demonstrate strong leadership and perform effectively on the job.

With the assistance of Bill Honig, the State Superintendent of Public Instruction, and Association of California School Administrators, we identified fifty superintendents with excellent "leadership" reputations. These superintendents represented a cross-section of urban, suburban and rural school communities across the State of California. We asked each of them to identify an outstanding principal from their school district.

The 100 educators completed the computer-based surveys and received a "picture" of their personal and job preferences in graph format with a narrative that clearly explained the results. The Job-Person Match was also presented in graph and narrative form. The research yielded three data clusters: a) principal's perception of the role of the principal, b) principal's preferred work style, and c) superintendent's perception of the role of the principal. Each principal received an analysis of the data and was invited to a conference to meet all of the other participants and share their success.

Judy and I visited every school and we interviewed the principal to find out why they were nominated by their superintendent for the recognition. The survey pointed out that some were not suited for their job because they did not like managerial duties. Others did not like to follow all the district or state regulations. All of them cared about kids and learning! That was the necessary ingredient to being identified as a great leader of a good school.

California legislators recognized this project for identifying concrete ways to improve education. In 1988, Mary Leslie, the Executive Director of Pacific Telesis Foundation, received the President's Private Sector Initiative Citation award for its Managing Excellence in Education program support.

Bill Honig stated, "One thing you find in every successful school is a sense of spirit and administrators who work together as a team and reinforce each other. This project is trying to tease out the factors that enable schools to build this kind of spirit and teamwork."

Managing Excellence in Education continued for several years and we implemented this process with district and site administrators, school staff with the principal, beginning teachers with experienced teachers, and individual participants. Collectively we used a new computer-based evaluation tool, with outstanding principals in California, to identify the leadership skills necessary for tomorrow's schools. The principal's all benefited from this initiative but in the end it was still about the kids!

EDUCATION FOR THE FUTURE

As a result of the success of the *Principal Role* project, I was asked by Pacific Telesis Foundation to help design and coordinate an Education for the Future project. The foundation funded a five-school project representing the diversity of California. The idea for the project was created by the President of Pacific Telesis. He wanted his company to remain globally competitive and was concerned with the education system and the inability of high school graduates to pass entry level tests. His comment: "If this continues we

will have to outsource our work or move our company”.

Education for the Future was designed to help educators anticipate the 21st century. The schools were located in Vista, Irvine, Salinas, Sacramento, and Oakland. The student population included Caucasian, Asian, Hispanic, and African-American kids. Schools were guided through restructuring techniques and team-building activities. Teachers learned how to develop curriculum relevant to the real world and portfolio assessment strategies to accurately measure student knowledge and performance skills. We emphasized “future” careers and technology advances. I remember telling the president of the foundation, “Someday you will read your New York Times on a computer!” His response, “It will never happen.” I told teachers, “There will be a phone in every classroom.” They did not believe me. “You will use computers for curriculum.” The response: “Not a chance.”

This program received recognition at the annual NAPE conference and as a result we were invited to England to share the research we were doing with these educators. It was quite a contrast from working in these schools in California to attending a British Telecom corporate meeting and a tour of Chatsworth House by the Duchess of Devonshire. Little did I know that this would be a precursor to my several years of work with schools and business partners in and around Sheffield, UK and the location for the fourth EFG Conference, held at Doncaster College in High Melton.

In Education for the Future, educators worked at the school site and collaborated in multi-school training sessions where experts, technology gurus and innovators shared strategies to prepare students for the 21st Century. Teacher interactions were particularly valuable. They compared curriculum, district expectations, student progress, English language development, parent involvement and demographic issues. I remember one conversation, regarding parent involvement between a teacher from Irvine and another from Oakland. The Irvine teacher was accustomed to extensive parent involvement, as I had experienced at Vista Verde. She described how one child was suffering because he was not getting homework help from his parent. The Oakland teacher kindly said she understood as she had experi-

enced a parent problem the previous week. It seems that one of her mothers died from a drug overdose and it really affected the child. There was significant silence in that conversation.

As I am writing this book, I think of the parents at 21st Century Prep, (see chapter five) who came to the school to receive free medical care from doctors who were participating in the health fair organized by the Learning Leaders and students as part of their Well Into the Future project. Then there were the families in Akiachak, Alaska, who counted on the hot breakfast and lunch their students received at the school (chapter six). And the parents who took care of the Pittard Campus School nature trail during the summer (chapter six); and the parents who managed the recycling program at Truman Benedict School. In addition, parents organized the school garden clubs at Concordia School and Marblehead Schools (see chapter 8). I distinctly remember the parent who left an evening meeting at San Onofre School to go home and find a Marine Corps Chaplain waiting in front of her house to report her husband and child's father had been killed in Iraq (chapter seven). These examples emphasize that teachers must understand the parent and family resources and needs to fully appreciate the student's ability to learn.

One of the multi-school meetings was held at the Marriott Hotel. I spoke with the manager of the hotel who asked, "Have you heard of a guy named Joel Barker? He's a futurist and coined the Paradigm Shift concept. I would like to get him to this hotel to work with my staff." I responded, "Yes, I just read his book and I would like to have him speak to the teachers." I called Joel and he agreed to come to the meeting. At the end of his presentation to the teachers and hotel employees, he shared a curricular concept he had previously developed, and integrated learning program called Ecological Futures & Global (EFG). He had done nothing with it but would like to work with teachers. A few teachers indicated interest. The Marriott Hotel provided the accommodations and Joel donated his time.

Subsequently, I formed the EFG curriculum collaborative, a non-profit organization, and began planning our first development conference

with Joel Barker. A college professor was hired to continue coordinating Education for the Future. A few years ago one of the principals in the project saw me at a retirement party. He came up to me and said, "Everything you told us about what kids would need to know in the future is now true—we did not believe you at the time. I thought you might like to know that." I thanked him for his comment.

This initiative was driven by a private-sector CEO concerned about the education level of high school graduates! Does this sound familiar?

WILL COUNTY, ILLINOIS

I was contacted by Will County Chamber of Commerce to help them work with high schools in Joliet, Illinois. Their goal was to increase work readiness on the part of high school students. We formed focus groups of corporate executives, business leaders, school administrators, teachers, students and parents to discuss ways for students to connect learning to the real world. I will never forget a conversation between a teacher and a company CEO. The teacher was stating, "My Hispanic students have no vision for their future other than flipping burgers."

The CEO replied, "I would hire a person who spoke fluent Spanish in a heartbeat, if they could speak English fluently, think, problem solve, and show up for work on time." It appeared the teacher did not hear a word this man said because she continued to lament the view of her students. I jumped into the conversation to say, "You have a vision for your students sitting right next to you! Schedule a field trip to this company so your students can see the job opportunities for Spanish speaking people right here in Joliet."

These teachers began to understand the private sector had a role to play in their student's education. Many teachers had never worked in the private-sector and many had or still have a poor view of private sector initiatives. When I was interviewing teachers, I looked for people who had experience in the private sector. Two of the finest teachers I have hired were previously a practicing attorney with a large law firm and a CPA.

COMMITTEE OF 100 IN TUSCON, ARIZONA

I was asked to coordinate the "Committee of 100" to develop an instructional plan for Tucson Unified. This committee was made up of teachers, administrators, board members, business representatives, the Chamber of Commerce and university professors. Approximately 50% of the participants represented education and the other 50% represented the private sector. We held several large meetings and broke into five committees to brainstorm and identify skills needed by the students to become Responsible Citizens, Collaborative Workers, Problem Solvers, Self Directed Learners, and Quality Producers. The public/private sector discussions were powerful because they raised diverse ideas and different views of the future of education and business. The results included recommendations to ensure that high school graduates were prepared for life, work and citizenship.

As with any group there are detractors. One particular teacher found fault with every recommendation saying, "I agree it is a good idea but..." followed by some reference to why it could or would not be accomplished. My response was to indicate I understood there were barriers to change but they could be overcome. During the final committee meeting I was not so generous. As she frantically waved her hand in the air to state the plan would not work, I said, "Contrary to what you may think, this district did not hire you to be happy." There was a large round of applause and the assistant superintendent asked if she could make a poster using my statement. I replied "sure" but that she should also reference Abraham Lincoln's quote, "People are about as happy as they make up their minds to be." I went on to state that the district hired teachers to guarantee that all students learned at a high level. If this was happening, great! If not, changes needed to be made.

We did not let a few vocal detractors shut down important discussions and significant change to improve education for students.

NEA MEETING

During this consulting time, I was asked to present the keynote message at a conference for National Education Association Presidents from large school districts across the United States. The conference was held in Florida and since I lived in California I asked the director, "Why would I want to travel across the United States to give a one hour presentation to this group?" She responded, "Because they need to hear what you are saying to other groups." She had heard me present at a business/education partnership conference. I replied, "They will hate what I have to say!" She agreed but asked me to come anyway. I presented real-world learning, teacher and student teams across grade levels, extra planning time beyond the negotiated day, involvement with parents and business partners, and evaluation based on student results.

A number of participants came to the microphone during the question-answer period. They took great exception to my recommendations, and I responded with even more ideas that seemed to irritate them. Later I heard that I was referred to as "that woman last night who said. . .". Evidently, I caused them to think about their leadership responsibilities. I received several emails from participants over the following weeks. One in particular said he totally supported my recommendations but could not go to the microphone and say this because he would be criticized by the group as a whole. I believe this represents the mentality within the union. There are many fine teachers who must conform to the mass mentality if they become leaders.

BELLFLOWER

The CEO of Rockwell International became principal for a day at Bellflower Middle and High School. At the end of the day he inquired about how the corporation could help the school. As a result of this inquiry, and a positive outlook by the school principal, I was hired to help the school re-

structure. Warrington Parker, a Rockwell restructuring executive, and I spent many weeks working with the design team composed of four administrators, 19 teachers/specialists, 13 students and 3 business/community representatives. The emphasis was on integrated "clusters" instead of departmentalization. Rockwell technicians analyzed the technology and communication tools at the school and made recommendations for state of the art systems. They paid for some of this installation.

Some of the Bellflower teachers and administrators became intrigued by the EFG Curriculum Collaborative and attended the conferences in Erie, Pennsylvania, and in England. As a result of this experience, the students were grouped in "clusters" to complete integrated units. The first cluster investigation was titled "Back to Your Future" developed at the Erie Conference by Sue Rosenberg. The students investigated the past and present in transportation, communication, business, education and recreation in the city of Bellflower. It had changed from a farming community to a city in the Los Angeles Metropolitan area. The students then projected these same categories 50 years into the future for Bellflower. Sue Rosenberg, their teacher at Bellflower, reported, "I had to teach my students how to research and investigate." Many of the students said, "Where is this in the textbook and what is on the test on Friday?" This unit was shared at an EFG conference and became "Community Challenge," a study that could be adopted and adapted by other schools.

Trish Farber's middle school students visited Rockwell to learn about the development of a new space station. This unit, "Explorations through Time and Space," put Bellflower residents first on a space station, and then on a Mars colony. These students met with engineers and scientists and asked questions of executives at a lunch in the Rockwell executive dining room. They went back to school, formed space exploration teams and utilized all of the subjects to create a space tool. They integrated math, science, writing, presentation skills, and art in the completion of their work. Each team designed a space exploration logo. Rockwell provided visitations by both astronauts and cosmonauts and sent engineers to assist with studies of zero gravity and

robotics. A culminating event in 1996 was a live downlink with cosmonauts on the MIR space station. The teachers, students and Rockwell engineers chose experiments for the cosmonauts to perform in space and communicated with them via satellite during the experiment. Students learned a number of Russian words and phrases that assisted them in the actual dialogue.

Sue Rosenberg working with Darren Platt, a new teacher, developed a school travel agency where students integrated math, geography, social studies, government, transportation, and art for advertising. Learning experiences included a Metro Rail trip to Los Angeles, where 10 teams of students and their chaperones followed separate itineraries. The students planned these itineraries and estimated the time necessary to complete the trip as well as the associated costs. This ultimately became the "World Travel" project. Sue Rosenberg recalls: "When Darren Platt joined our team in our first year, which was his first year ever of teaching, we told him, 'This is the way you teach!' And it was!"

In all of these experiences the students were motivated to learn, engaged in research, and were developing team skills working with others. Teachers were planning and working together across subjects and grade levels. We were excited to participate in the state Western Association of Schools & Colleges (WASC) review. This is the basic tool for accreditation of schools and colleges (K-14) in California and the Western States. We were disappointed when a member of the review team, a "career" administrator, recommended less integration and more departmental meetings. This did not deter the school.

Bellflower students were grouped in multi-age clusters, working with private sector partners to investigate real world issues and integrated all subjects and standards in their final presentations. One student, participating in a joint teacher student meeting, put it this way: "I think you guys finally get it!"



Four

EFG Curriculum Collaborative

“Vision without action is merely a dream, Action without vision just passes the time. Vision with action can change the world.”

—Joel A Barker, Futurist.

“What does EFG stand for?” I was asked this question when I was writing this book and it was a frequently asked question at the time. And, when the answer was “ecological, futures, and global” the response was “huh?” Let me explain.

An Ecologically competent person has a working knowledge of the planet, understands his or her own role within an ecosystem, and the positive and negative effects he or she can have on it, and can use knowledge and skills to improve the environment.

A Futures-competent person understands the relationship between the past, present, and future; has learned and can apply a broad range of tools, accepts responsibility for thinking about long term implications of actions and technology, and feels empowered to affect, adapt to and respond to change.

A Globally competent person has broad knowledge of the cultures of the world, deep knowledge of one culture, a language other than their own, and accepts responsibility for helping establish global stability and peace.

In a nutshell EFG stands for real-world, project-based learning across all subjects, portfolio assessments aligned with content standards, rubrics, and real world expectations, student research, investigations, data analysis, and presentations to demonstrate competency, utilizing advanced technologies and partnerships with parents, business and the community. I organized the EFG Curriculum Collaborative, a 501(C)3 organization, to motivate educators

to write and test "projects and portfolio assessments." This was a K-Competency model with students graduating when they were competent, not at an arbitrary age.

This theme-based learning was not new. The study of real-world, up-to-date information by applying content standards, and integrating all the subjects in a student-developed portfolio of work using advanced technology changed the picture.

The first EFG conference was held in Irvine in 1990 at the Marriott Hotel. We invited forward-thinking educators from Southern California and Joel Barker invited representatives from Minnesota. We challenged them to identify the skills necessary for life, work and citizenship in the 21st century. Essentially, "What will kids need to know and be able to do when they graduate?" IBM provided computers for our use, setting the stage that technology would play a major role with us and with the students. Joel Barker, founder of the EFG concept led the "futures" discussion with data about future trends in medicine, technology, industry, and the environment.

As we began to develop this different approach to learning, we would hear teachers say, "My principal won't let me do this." "The other teachers at the my school won't like this." "The union will stop the planning time." These are all traditional blocks to change. Our suggestion: Try one unit or project and see how it works.

The second summer conference was held at Lake Tahoe in California. We had participants from California, Tennessee, Alaska, Minnesota and England. This diverse group of educators suggested traditional approaches, innovative strategies, and off-the-wall ideas with many heated discussions about 21st century learning. Working in the mountains of Lake Tahoe gave us the opportunity to take a hike, clear our brains, and start over. We made great strides in creating a "different" curriculum with integrated subjects, content standards and real-life applications. Joel continually presented his "paradigm shift" concept, applying it to change in education. He demonstrated his "implications wheel" to show how to make appropriate decisions implementing new ideas. The Director of Health Services for Irvine Unified and a teacher from Vista Verde School decided a skit was necessary at the

last dinner. The two of them became “Mom and Pop,” coming down from the mountain to see who these people were, using all of these big words. Mom, in a ugly old dress, asked Pop, “Do you like my new dress?” Pop replied, “I do like the dress.” Mom then said, “I got it at the swap meet for 20 cents—you know a pair of dimes! I call it my pair of dimes shift.” This was the crowning touch to our two weeks of hard work and the participants went wild with laughter! And Joel thought it was funny too!

The educators attending this conference understood the need for relevant, real-life curriculum with applied subjects and standards. They wanted students to investigate issues from all perspectives. They also realized we needed new assessment strategies, well beyond standardized tests, to accurately measure student competency. I have cited multiple examples of this in Chapter Five at 21st Century Prep in Chattanooga, Tennessee, and in subsequent chapters.

In year three, the conference was held in Erie, PA, where we partnered with the Chamber of Commerce. Each year teachers came back to report what worked, what did not work, who got in the way and, more importantly, what students learned. We had the opportunity to work with several senior examiners with Educational Testing Services (ETS) and they helped us develop rubrics for the portfolio assessments, presentations and exhibitions. These could be matched to state and national standards. The number of conference registrants grew.

The fourth EFG summer curriculum conference was held in 1993 in Barnsley, England, where we interacted with UK business partners and educators from the US and across the UK. We were taking a British Regional Railways sponsored field study to York when one participant stated, “If we are going to get serious about these concepts, we need to apply them in an entire school with all of the students.” Teachers and administrators from Chattanooga, TN said, “We’ll do it” – then they faxed (no e-mail at that time) Dr. Harry Reynolds, their superintendent to say, “You won’t believe what we just volunteered for.” (See 21st Century Prep in the next chapter).

Middle Tennessee State University also taught EFG projects in its own

Pittard Campus School where aspects of the EFG were taught. Dr. Tracey Ring supervised the teachers who taught EFG. Participating teachers all had master's degrees, five years of teaching experience and, in addition to their campus school duties, they taught one university course during the year. Dr. Tracey Ring, the professor/coordinator, linked university specialists with the EFG Projects. The school implemented "Community Challenge," changing the title to "Magnificent Murfreesboro." The students examined their city from the perspective of past, present and future with a number of field studies into the community. Their projects and reports incorporated technology, research on the Internet and interviews with their parents and grandparents. Students researched information provided by the Murfreesboro Chamber of Commerce.

2011 quote from graduate student: "I was in first grade in 1995-1996. I am currently 22 years old and still remember learning about historic Murfreesboro. Being in first grade, I made a model of all the historic buildings in downtown. I am now working towards becoming a teacher and think about how much fun that was. I feel that students need things like this experience to make learning fun." (See other Pittard examples in Chapters six and eight).

By now we had representation from across the US with a few from the UK and Canada. For ten years we held summer workshops where educators shared their implementation strategies from the previous years and planned for the following year. Student achievement was increased in every case. It was amazing to watch innovative, creative, well-educated teachers designing learning strategies and curricular concepts that significantly improve student learning. These teachers were not sent to these conferences, they "chose" to attend and most paid their own registration fees. The following universities recognized the valuable work being done and offered credit for conference work and follow-up implementation with students: University of California-Irvine, Northern Arizona University, Grand Canyon University, Middle Tennessee State University, Chapman University, University of Tennessee-Chattanooga, Idaho State University, and Doncaster College, High Melton in the UK.

Twenty-four generic projects were created and many have been modified and adapted, using state and national standards, for students and schools across the US and Internationally. Examples of this applied learning can be found in every chapter of this book. Innovative educators continue this type of instruction today because they understand that test scores will improve and students will learn at a higher level if they can connect the learning to the world and their future.

The "Global Economics" project was adapted at Royston Comprehensive School in Barnsley, South Yorkshire, UK. Students worked with a local bank to investigate particular issues surrounding productivity. The learners constructed a survey designed to determine the number of primary languages spoken by bank employees. The survey, which was distributed to all of the bank's employees, also questioned the assistance that was needed by each employee in order to increase productivity. The survey data, compiled by the students, was incorporated into a written report and presented to the bank. Several schools have researched allowance, household, and school budgets. Some have started a business or a fund-raising project and calculated what it would cost to start the business and what they should charge for the item that is sold. 21st Century Academy compared currency in the United States, Russia, Germany and Japan.

The "Water" project has been implemented in schools across the United States and around the world. Students at Silver Creek High School in San Jose, CA, asked the question, "Why are the fish dying in the local river?" They investigated the pollution and the companies causing the pollution and, working with the local EPA, developed a plan to clean up the river. Water projects are still being featured on www.itsyourenvironment.org.

Treasure Mountain Middle School students in Park City, Utah, using the "Carrying the Torch" project, learned what it takes for a community to prepare for the Olympic Games. Working with the Utah Olympic Committee, they studied the construction of the Olympic venues on the mountain, costs associated with the development, and profits as a result of the Olympics coming to Park City. They also investigated transportation, management of

traffic, and hotel construction. They learned about the history of the Olympics and the need for an understanding of other cultures around the world.

The partnership between Weyerhaeuser and Washington County Union School District in Plymouth, North Carolina helped the students at Washington County Union Middle School develop and implement "Forestry, Pulp and Paper." This was a spin-off of "Your Land/My Land." Students researched and learned about a major industry in the area, investigated the human need for logging, and recognized Weyerhaeuser's responsible practice of planting more trees.

The "Weather Patterns" project originated with teachers in Minnesota. They studied the effects of all types of weather and storms on the local community and in other parts of the world. Students learned to read the weather maps in the local newspaper and located up-to-date information on weather Internet sites and TV weather stations. They created their own weather charts and calculated the costs of cleaning up or rebuilding after a storm or flood. "Weather Patterns" was adapted by El Sol Charter School in Santa Ana, CA. Kindergarten and first grade students studied weather maps and locations in the world where it snowed. They worked with a sports company to investigate clothing that should be worn in the snow and safety concerns in a storm. This culminated in Snow Day when five tons of snow was delivered to their playground.

Hoku'ula Homeschool, in Hawaii, implemented "Food for the Hungry." They brought families together to create baskets of food for distribution to homeless organizations in Hawaii. Learning experiences included managing a bake sale, donating allowance money for the project, learning about well-balanced meals and making public service announcements on a local radio station.

Students in Rupert, Idaho, using "World Food", studied the Idaho potato industry. They learned all aspects of growing, marketing, and delivering the product to the community and world. They also learned valuable information from the Farm Bureau and local potato growers.

"Business and Industry" was implemented at Eastern Avenue School

in Bettendorf, Iowa. Students investigated all business, industry, trade and transportation associated with I-80 and ways that Bettendorf benefited from this interstate highway. They studied the positive and negative aspects of I-80 and used the Internet to link with Bellflower High School to compare I-80 with the freeway system near BHS. This project was also implemented by Royston Comprehensive High School in Barnsley, England by partnering with the British Regional Railways to create "Ticket to Ride." The students researched and wrote reports about another town in England. They received a "ticket to ride" to that destination for further investigation. At Birds Hill School in Winnipeg, Canada, this project was incorporated in the Renegade Consumerism study. The students studied what people need and want based on their location in the world. They investigated ecological issues such as packaging, and also started a business at the school, using some of their profits to sponsor a business in a developing country. Robinson Elementary School in Jacksonville, FL partnered with the Jacksonville Jaguars football team and created a project called Jag Jam. The students studied all aspects of a professional sports team in their community. Thomas Edison Elementary students in Glendale, California, learned about the Glendale Galleria in their community. The students mapped the stores in the shopping center and completed a comparison of merchandise, customers and profit. They created an advertising poster and compared information on the Internet. Some of the learners made a presentation at a Galleria Management Group meeting.

Rawthorpe School in Huddersfield, UK, formed a School Management Group with representatives from Careers Service, Trident, Compact, TVEI, Neighbourhood Engineers, and TEC/Education Business Partnership. The school, with support from these partners developed their project based on European Awareness. The project was highly commended by the Centre for European Education and received a European Curriculum Award.

Florida Community College at Jacksonville incorporated the "Well Into the Future" project in their nursing department. Representatives of the college worked with K-12 schools to increase the awareness of health concerns.

Sabin Magnet School in Chicago, Illinois, under the leadership of Ed Peacock also implemented the "Well Into The Future" project. Teachers matched the project guidelines with the Illinois Health Goals. Their wellness project targeted body, mind and societal attitudes. The students participated in several field studies, including one undertaken at the Cook County Jail, where they interviewed inmates. Learners in each grade level at this K-8 school concentrated on a different aspect of health, including nutrition, exercise, drugs, quality health care and social/emotional issues. "The Arts" project was originally implemented at Sabin where the students studied the Monet Exhibit at The Art Institute of Chicago. Students learned about Monet's life and paintings. They studied the history of Impressionist art, researched the economics of the exhibit, including the cost of tickets and record attendance, and compared this data to past and future exhibits at the Institute. In their "Small World" project they studied a different country each month.

As a result of all these examples, I was invited to present at the first International Partnership Conference in Paris, France. The delegates came from 28 countries. Our EFG team, representatives from California, England, Canada, and McKee Foods Corporation, presented the EFG hands on approach to integrated curriculum. The value of this and subsequent biannual conferences were the innovations shared and collaborations formed.

With the growth of the collaborative, I found myself in need of a part-time assistant, one who could coordinate events, interact with educators and business partners and think "out of the box." I interviewed several former school district secretaries, but their framework was a school bureaucracy, and I wanted more of an entrepreneur. I was at an outdoor vegetable market in Newport Beach, California when an old friend approached me and asked, "What have you been up to?" Not wanting to spend much time in the market I responded, "Working with schools and curriculum." She replied, "That's nice" and moved on. One of the clerks overheard the conversation and began to ask questions: "What type of curriculum and where are the schools?" I replied that the schools were across the US but we would soon be testing out all of our concepts with a school in Chattanooga, Tennessee.

She responded, "I'm moving there in a month and don't have a job!" I asked her background and she replied that she just received her master's degree in sociology and was working part-time for the county youth employment agency and planning conferences for educators. I hired Leslie Bannier the next day. She moved to Chattanooga, set up an office in the school, and we worked together for the next five years coordinating conferences and regional trainings. You never know when the exact person you are looking for will show up. This applies to future employees and partners.

I continued to schedule summer conferences in Flagstaff, Arizona and Orange County, California. In each conference we had new participants and returnees sharing their student stories. One reason that people returned to the annual conference was to hear innovative specialists presenting topics such as; technology breakthroughs, portfolio assessment strategies, the UK Experience, Total Quality Assessment Tools and Techniques, multi-age grouping, and new architectural designs for innovative schools. Joel shared his latest future thinking tools. The Flagstaff participants came from 19 states, Canada and the United Kingdom. An increasing number of them had experience with integrated curriculum and technology. We partnered with W.L Gore & Associates where we learned about their advanced fabric, medical, electronic, and industrial products. This company demonstrated the multiple careers of the future. Joel, Todd Bergman from Mt. Edgecumbe High School in Sitka Alaska, and I also presented EFG to 700 school administrators at the Zealand Principal's Conference. We had an opportunity to visit schools and discuss the New Zealand educational programs. This group of educators matched our competencies and core skills with their curriculum framework and subsequently implemented the *Water* and *Native Cultures* projects. A visit by one of the principals to 21st Century Prep further increased their interest in collaborating to improve education,

The New Zealand experience was shared at the Orange County Conference. Joel Barker also provided three, thought-provoking presentations based on his books: *The Promise and the Pathway*, *Wealth Innovation and Diversity*, and *Tactics of Innovation*. We were shifting paradigms in the way

we thought about and delivered education. Many other speakers shared "out-of-the-box" thinking. However, we were also having a discussion about the difficulty in explaining the name to educators who were part time implementers and parents who were accustomed to subjects instead of integration. It was difficult to describe a fully integrated, standards based curriculum using projects and portfolios, using the EFG title. One teacher suggested, "Why don't we call it Educating Future Generations. That's what we are attempting to do." This idea garnered significant support, and in 1996 I added the name "Educating Future Generations." The original schools continued to use the Ecological, Futures, Global definitions.

The ten-year "EFG reunion" was held in Chattanooga, and the Collaborative members were thrilled with the progress that had been made at 21st Century Prep over the previous three years. Student portfolio presentations were amazing! During this time we were also invited to present at subsequent International Partnership Conferences in Trondheim, Norway, Toronto, Canada and Edinburgh, Scotland. In each case Collaborative members presented their success, failures and results in identifying 21st century skills and instructional strategies to educate future generations. I was at 21st Century Prep prior to going to Trondheim. One of the high school students found me and said, "I hear you are going to Norway! Do you know they use hydroelectric power in that country? I need information for my energy project and I hope you can bring some back for me." I assured him I would look for energy information on my trip and as a result I spent a considerable amount of time looking for information for his project.

About this time the standards movement was taking shape across the United States. We had been integrating standards for the past ten years. "No Child Left Behind" was an excellent start to requiring standards based instruction for students and teacher assignments based on content majors and training. Unfortunately, it did not take long for text book manufacturers and many district bureaucracies to translate this into programs requiring every child at a grade level to be on the same page of the same text book every day, with competency measured by numerous multiple choice tests.

We had proved we could teach standards at a high level, demonstrate student achievement well beyond expectations, and “know” that the students “knew” what to “do” with the learning.

All of the EFG Conferences caused teachers to think differently and change strategies based on skills and knowledge necessary for life, work and citizenship in the 21st century. Every project emphasized a high level of student competency in math, science and technology! Local and national standards, embedded in the learning, were demonstrated in the portfolio presentations. We knew what kids “knew!” In every case the test scores significantly improved. National and international private-sector partners reinforced the need to prepare students with the skills necessary for careers in the future and provided recommendations and training for students and teachers. Universities recognized the innovative practices and provided training and credit for this development.



*“Education would be much more effective
if its purpose was to ensure that by the time they leave
school every boy and girl should know how much they do not
know, and be imbued with a lifelong desire to know it.”*

~William Haley

Five

21st Century Prep, Chattanooga, Tennessee

*"Those who say it cannot be done should get out
of the way of those who are doing it."*

—Anonymous

When I describe this school I want you to think of a "paradigm shift" in the way we educate youngsters. After the EFG conference in England, Joel and I met with Dr. Harry Reynolds, the Chattanooga City School District Superintendent. In the fall of 1993, working with his school board, Dr. Reynolds identified a failing junior high that needed to be reformed. This is where consultants show up, make recommendations for existing teachers to implement with the current students, leave town and hope for the best.

Not so in this case. The teachers and students were told that at the end of the 1993/94 school year the school would be emptied of students and staff. The building and surrounding grounds would be converted to a K-12 magnet school and the teachers could choose to "apply" to work at the school. (A "magnet" school is designed for students from across the region or district and offers a program based on a particular theme or interest.) Today these are called schools of "choice", academies or charter schools. An informational meeting was held with prospective teachers from across the district. It occurred to me, "What if no one wants to work here?" In fact, we had approximately 100 teachers at the meeting. We described the school configuration: K-12, multi-age learning levels in groups A, B, C, and D, mastery requirement for promotion to the next level, latest technological tools utilized by everyone, integrated subjects and a high level of core skills emphasized along with real- world applications. Teachers would become learning leaders

and all students would achieve at a high level. This sounded good to a number of teachers and they asked for the application. We provided it on a computer disc. Keep in mind this was 1993. Many teachers looked puzzled and said, "I don't know what to do with this." My response: "Guess you can't apply." I then explained that they did not need to "know" how to use technology but they had to be willing to "learn" because computers would be in every classroom. I was relieved when many applications began arriving. It seems the teachers found someone who could download the application from the computer disc and print a copy.

We were breaking every conventional configuration, structure, and teaching strategy to improve students learning. We were also pushing teachers to utilize the latest technology.

Our application included a different approach as well. In addition to the usual name, address, credentials, teaching experience, we added a few items of our own: Describe the five most significant changes in the world in the next 10 years. Identify the 20 skills adults use every day. Describe how you will incorporate both of these lists in your classroom instruction, every day, beginning in kindergarten. We interviewed the prospective staff based on their answers. We were also allowed to hire three teachers from outside the school district. We selected learning leaders who spoke German, Japanese, and Russian. These were the languages we taught throughout the school in addition to the mastery of English. Several teachers, who were not selected contacted me to say that the application process was a huge learning experience for them. They said in part, "I appreciate thinking beyond the traditional approaches to education and learning about the new technologies."

Students from across the district could apply to attend this school. It was a school of choice! Based on the district demographics we anticipated approximately 50% Caucasian and 50% African American students. When it became obvious to the white parents that we had 70% black students, they withdrew their children. This prompted the local newspaper to publish in its front-page headline, "Magnet School Losing Its Attraction."

You can imagine my delight when, at the end of the first year, there was a waiting list of "white" families wanting to enroll, and at the end of the fourth year the same newspaper published the following: "Accountability report cards released Monday afternoon show that 21st Century Preparatory School received a grade of straight A's for the 1997/98 school year. The school showed improvement above the national average in every subject area, according to the accountability report cards created by the Tennessee Department of Education. The results of what is called the value-added system are based on standardized test scores in mathematics, reading, language arts and science comparing 1997 results with 1993. This is the third year the school has received good news of academic results."

This school demonstrated that investigative, applied learning motivated students, significantly improved learning AND increased test scores. Students, who had failed at other schools, saw the connection between school and the rest of their lives and worked hard to learn at a high level..

In August 1994 the school began operating in a beautiful old, three-story, schoolhouse. The classrooms were very small so we worked with architects and contractors to determine how to modify the facility to "facilitate" learning. It was determined that walls could not be removed but large arches could be made between the old classrooms. This would allow for multi-age learning, large and small groups and teams, and learning projects of every size. That summer we held an EFG conference in Chattanooga. This was designed to provide curriculum development help for the 21st Century Prep staff from all the EFG Collaborative members. McKee Foods Corporation was an instant partner providing funding for materials and TVA provided renovation assistance and donated furniture. Dupont donated furniture and equipment and Milleken Carpets provided new carpeting for the classrooms. Joel and Susan Barker donated new computers and we all donned work clothes to help finish the building modifications. This was an unbelievable effort on the part of everyone involved! I will never forget seeing Dr. Reynolds, the district Superintendent and his son painting a radiator on the Saturday before school was to open. I asked him, "What are you doing?" He replied, "Painting

a radiator. It needs to be done before Monday and someone has to do it!" That's the kind of superintendent he was! McKee Foods Corporation continued to be a major partner at the school. They assisted with site improvements, provided volunteers and featured school successes at the annual National Association of Partners in Education (NAPE) conference. Each department head visited the school and described his/her job, highlighting the skills necessary to get FDA approval for a new "Little Debbie" cake recipe (science); price products, manage budgets and develop business plans (math and economics); transport products across the US (geography, history, social studies); and advertise and market the latest products (English and communication).

Administrators and Learning Leaders welcomed private-sector involvement in the learning process. Students loved interacting with these professionals and were motivated to do their best work to share with them.

All of the students at 21st Century Prep were required to wear uniforms. There was flexibility because the clothing included khaki, navy or black slacks or skirts and single color polo shirts. The school had a multi-color "look" but a uniform dress code that eliminated gang identifications. We selected these items because they could be inexpensively purchased at Wal-Mart, Kmart or Target. When it was determined that many of the students had "failed" at their previous schools, the first month's curriculum was changed to Covey's 7 Habits of Highly Effective People. Stephen Covey of the Covey Leadership Center donated the staff training and the learning leaders applied the 7 Habits with the students. This was before the student versions of his books were available. I will never forget hearing the response from a nine-year-old when she was asked why she got into a fight on the playground. Her response: "Well, it wasn't a win-win situation. But next time I will listen before I hit someone." During this time, the students also learned organizational skills, homework management, research techniques, team skills, and behavioral expectations. The students also were taught how they would be evaluated. The learning leaders explained the portfolio system and the expectation of mastery of core skills in every subject to every child K – Competency.

The media sent a TV crew to the school to describe how we were wasting our time because “these kids can’t learn”. Before the TV cameraman left the building, he enrolled his child. The local environmental center was worried that a large number of students from 21st Century Prep would be unruly. After the visit they reported that it was the best-behaved group of students that had attended the center. This, of course, was because the students were researching an ecological issue, had their research questions identified before they arrived at the center, and proceeded to gather data necessary for their portfolio of work.

All parents were required to provide 18 hours of service per year to the school. This could be anything from helping out in the library, construction on the site, or helping out in the school garden. The number of volunteer hours was recorded at the school and the coordinator informed the parents of the amount. I was on the campus when the totals were announced at the end of the school year. A parent came to the office in a panic. “I have not done the hours and I don’t want my child removed from the school. This is the best school she has ever attended.” I asked him what he did for a living. He responded, “I’m a painter.” The school provided the paint for him to paint two classrooms and he had it completed in two days, volunteer hours were completed, and his daughter continued to be enrolled in the school. This would not be allowed in most school districts because the classified unions will not allow volunteers to “take away their jobs”. The fact that the walls have not been painted in years and there is no intention or money to do the job is immaterial. The union leaders of non-credentialed staff will still block any infringement on their negotiated agreements.

Another parent was a vice president of Tennessee Valley Authority. She connected the teachers and students with various departments at the company and TVA scientists served as judges for the student “Water” projects. TVA created venues for the Atlanta Olympic Games and the students working on “Olympic World” project investigated the venue construction and the water resources needed for the Olympic competition. Students also visited the site for the kayaking competition.

Parent involvement was expected. At times this might be an older brother or sister or a community mentor. These student advocates were welcome in every classroom, they all completed their volunteer hours, and many learned with their students.

Sue Rosenberg, The EFG Curriculum Collaborative Newsletter editor, decided to visit 21st Century Prep. She wanted to see things for herself. She observed: "Although I approached my visit with a journalist's eye, I also brought the perspective of an educational professional whose school has gone through three years of restructuring. Considering the comparatively short time that the EFG school staff had to prepare for their new venture, how were they dealing with a site that was new to them, new colleagues, new students, a new curriculum, new philosophy, new schedules, new materials, new administration, new assessment methods, as well as separate sets of expectations from district, community, parents, business partners, and members of the EFG Curriculum Collaborative? The answer is, quite well—perhaps even better than they think."

There are many student success stories at 21st Century Prep/Academy. A 17-year-old girl, having studied Japanese for two years at 21st Century Prep states; "I was interested in becoming an exchange student. I applied, was accepted, and spent a year with a family in Japan, attending a Japanese high school. I had not traveled outside of Tennessee and this was a life changing experience. The Japanese standard of excellence is high for their students and it rubbed off on me. There's a no quit, no excuses attitude held by the Japanese people and I think that idea is something the American schools should do. I studied more than ever and it was fun because that's what everyone did." This student went on to attend Howard University where she majored in international studies and assisted the Japanese professor in teaching her class.

A thirteen-year-old student shares; "I had a chance to visit Hamm, Germany with a team of students from 21st Century Prep. We examined the price differences, the economic conditions and the way they use nuclear power. We were using the "Energy and Lifestyles" project back at

21st Century and I studied the different ways they produce and use energy in Germany. People shape their lifestyle to the energy they have. I also have a broader understanding of the cultures and language of Germany." A sixteen-year-old student also reports on the trip to Germany; "They adjust their life to not waste energy, have a country wide recycling project and use mass transit."

Another student, who had failed most of his classes at his previous school, described his project to me: "My project is about the Tennessee River. I have a map of the river, a water quality analysis, a model of the walking bridge over the river, and information about the Tennessee Aquarium. I need to finish this before a man from TVA (Tennessee Valley Authority) comes to judge my presentation."

A team of learners studied Chattanooga during the Civil War and compared it to the current date. Another team investigated the economics of Chattanooga prior to the building of the Tennessee Aquarium. They completed an analysis of three possible economic scenarios of the future of downtown Chattanooga. This data was presented in maps, graphs and charts. The students examined attendance at the Aquarium, hotel occupancy, new restaurants, the new electric bus system, and the new business that developed as a result of the Aquarium. The students presented their portfolios to the Manufacturers' Association and employees at the Tennessee Aquarium.

During the first few years, I spent about a week per month at the school. I was surprised on one visit in 1996. As I was walking up to the school, I saw election posters for every public official running for office in Chattanooga. There were also posters for student council. Students picked a candidate, investigated the job description, their platform and campaign promises, and determined if they would vote for them. Students also picked a presidential candidate and tracked them on a map each day to determine where they were campaigning and how many Electoral College votes were in that state. "It's Your Choice" grew out of this hands-on investigation.

The school served as a professional development site for educators

and partners. Participants came from across the United States, England, and New Zealand to “see” what was happening at this innovative K-12 school. Learning leaders would help me describe the curriculum and assessment strategies to the 20–30 adults at each workshop. However, the highlights of each session were the student presentations. I will never forget one student who came to the visitor center, set up her maps, charts, graphs, and photos, and proceeded to describe her “Rainforest” project. She talked about the animals and plants, presented maps showing the geographic areas where rainforests are in the world, identified the destruction percentages, and named the products we use from the rainforests. When she was done a visiting high school teacher asked how old she was. She replied, “I am eight-years-old.” The teacher responded, “My high school students could not research and present as well as you did.”

Students answered questions at the end of each workshop. Again, a student surprised me when he said, “We could do harder projects.” After the visitors left, I asked him if other students thought the same thing. He responded, “Three or four.” I met with five students the next morning and challenged them to create a project, match it to the Tennessee content standards, and teach it to all levels of students. They were to be prepared to present their work at the next month’s professional development workshop.

They were ready! The team brought “structures” to the visitor center and one student described their process. “Design & Build” was an idea for a new project that I had when we were presenting with other schools. The students learn how an idea can be developed into a prototype. This project was perfect for our school because it could be done by all ages. I picked the name because it was catchy. I worked with five other students to develop the project and match it to the Tennessee content standards. Then we tested it with students aged 5-18. The younger learners designed and built an edible structure and then ate it. The intermediate age learners designed a structure using materials available in their classroom. Older learners designed an amusement park, an environmental city, a new language, a government, and a structure of the future.” The workshop attendees asked questions at

the end of the presentation and a teacher from Florida went back to her school to have her students design and build a play structure for their new playground. They partnered with an architectural firm and the elementary students used CAD (computer assisted design) to help with the design. The structure was dedicated at the time of the school dedication. Adopting and adapting was our philosophy!

Karla Riddle, the curriculum facilitator at the school, worked with University of Tennessee at Chattanooga to create a Professional Development School (PDS) for pre-service and student teachers at 21st Century Prep. These pre-service students were required to assist in the classroom, develop learning projects and identify the portfolio standards to be mastered by the K-12 students. The university students spent a semester on the school campus. University professors, who came to the school to work with the learning leaders and teach classes, were amazed at the high level of learning taking place on the part of the adults and students. PDS students were everywhere on the campus, learning the intricacies not only of teacher but teaching in this EFG environment. The university students took a class from Karla and also developed an EFG unit to teach to A,B,C or D levels. The PDS students prepared at 21st Century Prep were in demand by other schools when it came time to hire new teachers. These principals stated: "These are the best prepared future teachers we've ever seen."

During this time many partnerships were formed in the community including, TVA, Chamber of Commerce, Rotary, and the Manufacturers Association. Dr. Riddle and Leslie Bannier helped adapt the "Well Into the Future Project" which culminated in a health fair for all of the families. Doctors, dentists and other health care providers came to the school for the "Well Into the Future" Health Fair. They provided free tests and services for all family members.

I was approached by a professor at Virginia Tech to use the 21st Century Prep model with his graduate course in educational administration. I provided an initial introduction of the school to the class and each student or team of students took a particular concept to research. Parent involvement,

partnerships, real-world projects, portfolio assessments and multi-age learning were selected. The students were asked to determine if this model could or should be replicated. They interviewed parents and staff, compared this school with others and concluded that the school could and should be replicated but the drawback was it required innovative educators, doing hard work, over extended periods of time.

This was a comprehensive program to train teachers using up-to-date, real-world skills. Some of the college professors said, "These students can't do that." And then they found out, with the integrated, hands-on instructional strategies and multi-age structures, these students "could."

21st Century Prep was different. The school expected high achievement by everyone. Teachers became real Learning Leaders! The students WERE prepared for the 21st century and in 2000 the school was renamed 21st Century Academy. Many students had failed elsewhere and felt hopeless and helpless. Unlike in other schools, the learning leaders expected the students to achieve. One student said, "At the other school it was easier to get an F. Here I have to do it over until I get it right." The school had the same budget and staff allotment as other schools in the district (this is a key component regarding successful alternative schools today). However, the school did have many more partners and outside support. Over five years we provided on-site training for more than 600 visiting educators and many college students.

In 1997, the Chattanooga City School District merged with the Hamilton County School System and Dr. Reynolds retired. Hamilton County had higher achieving students and socioeconomic backgrounds than the city system. As a result there was less experience with creative solutions in schools serving inner city populations. Innovative learning leaders were moved to different schools and traditional approaches were adopted. 21st Century Academy was closed in June 2009.

A few years ago I saw the young woman, who studied in Japan, in a Chattanooga restaurant. She was excited to tell me that she graduated from Howard University and hoped to get back to Japan. She was pursuing

a career in international relations.

I recently interacted with one of the students on Facebook. He reported: "After a rather long hiatus, I am in the early stages of preparing for my return to the University of Tennessee (Knoxville) next summer (2012) in order to work towards finishing my bachelor's degree. I plan to make the switch from my previous major of political science to mechanical engineering. To help with the transition, I have applied to attend the University of Tennessee (Chattanooga) this summer in an attempt to enroll in their mechanical engineering program for the next three semesters starting in May. My plan is to pursue a research career in the robotics industry after both my undergraduate and graduate studies are complete."

Another student, now married with a child, ended up going back to Germany to live. He was one of the students who went to Germany while attending 21st Century Prep. He said, "I believe the constant access we had to technology, whether it was computers and the Internet in the classrooms to the encouragement to use it in class projects, made a difference in my education at 21st Century Prep."

21st Century Academy broke the mold and educated inner city students at a high level. Bureaucracy stifled its continuance.



“A child educated only at school is an uneducated child.”

~George Santayana

Six

Real-World Applied Learning

“Don’t say you don’t have enough time. You have exactly the same number of hours per day that were given to Helen Keller, Pasteur, Michelangelo, Mother Teresa, Leonardo da Vinci, Thomas Jefferson and Albert Einstein.”

—H. Jackson Brown, Jr.
Life’s Little Instruction Book

I have identified educational programs in six states that represent the real world applied learning emphasized in the EFG conferences. These are not in chronological order but in alphabetical order by state. These implementation examples showcase how innovative educators adapt innovative strategies to teach their particular state standards and adopt real-world learning to meet the needs of their individual students in their part of the world.

ALASKA

The students in the Yupiit School District in Akiachak, Alaska, live in three native villages: Akiachak, Tuleksak and Akiak. These villages are all connected by bush pilots, flying small planes and using gravel airstrips. Snow machines are used to travel on frozen rivers in the winter. While attending a teacher’s convention, I was asked by the superintendent of this district to help him write a Goals 2000 Grant, and I was also invited to train the K-12 staff. I agreed to provide information for the grant but neglected to ask where his district was located. When he received the grant and called for me to come and consult, I found I needed to take a jet to Anchorage, a cargo plane to Bethel and fly with a bush pilot to Akiachak. This was my first experience flying over rugged territory in a small plane with the wind blowing 40 miles per hour and a wind chill of 20 below zero.

Our goal with this grant was to connect these students from Yupiik tribal families to the real world through learning and applied technologies. We wanted them to develop a plan for their future that included employment and higher education. Our workshops began when the teachers arrived—also by bush pilot—from the other two villages of Akiak and Tuleksak. No bus routes here!

The teachers at the Akiachak schools live in modular apartments on stilts. All of these housing units are connected to the school with a raised walkway, handrail and rope to navigate the extreme weather conditions. Students receive hot breakfast and lunch at the schools because most of them live in homes without power or indoor plumbing. Computers are available for student use, when the generators are working.

This was an amazing place to work, with dedicated people making a difference in the world. I spoke with every teacher and asked why they chose to work in this isolated location. Dedication and an adventurous attitude were their responses. Some had been there for years and for others it was their first year. Each teacher or family had to plan their needs for the entire year, shop in Anchorage prior to the trip to the village, and live the entire school year on what they purchased in August. Veteran teachers had freezers full of fish and wild game. A few people traveled to Bethel or Anchorage during the school year and some packages arrived in the winter by snow machine. A library of books was essential. I thoroughly enjoyed speaking with a school board member who also drove the Iditarod. His description of his dogs and dog sled was amazing.

When I left the first training the superintendent suggested I come back in winter. I asked, "What do you call this weather?" His reply, "Balmy."

One learning project included inviting the "elders" into the school to demonstrate wood carving skills and basket weaving. Students then carved their own masks, investigated art galleries across the United States, priced their carvings, created a business plan, and proceeded to sell their work. All of this was summarized in individual student reports. University of Alaska helped the teachers determine the standards imbedded in this Native

Cultures project. Other students investigated the lack of police, fire and health services in the villages and developed a future plan for their personal education in these fields.

When I went back for the second year's training I met the teachers, in August, in Anchorage and one teacher reported, "We had many unkind words to describe your recommendations and we ran out of aspirin. But by the end of the year we realized that our students were really learning more and connecting what they learned to their future."

One of the principals responded, "The written reports the students completed to describe their 'Mask Project' were the best quality that I have seen in my years as a principal in the village."

My third year with some of the staff took place at a regional training held at Carrillo Intermediate School in Tucson. The two schools' population, Native American and Hispanic, had common socioeconomic backgrounds. Both student populations needed a positive vision of their future and the skills for life, work and citizenship. The Alaska teachers traveled to Tucson to train with the Carrillo teachers and "shop." They returned with essentials unavailable in their native villages. And since there were no stores in the village, that's about everything!

I had the opportunity to present at a "Total Quality" conference at Mt. Edgecumb High School in Sitka, Alaska. Outstanding high school students received an excellent education at this residential school. The students organized the conference, invited the participants, scheduled the sessions and meals and presented their school work. Students, from native villages were provided an expansive opportunity leading to college and careers.

At the time I was creating a "pin" to communicate we were "making a difference, one student at a time." Using Loren Eiseley's "Starfish" story, I contracted with an Alaskan artist to create a round pin portraying a gold starfish on the blue and green earth, on the universe filled with stars. He sent me his drawings and I was able to present the first "pin" to him at this conference.

ARIZONA

Carrillo Intermediate Magnet School in Tucson, Arizona secured property that was located across the street from their school. This adoption was a result of the students' work on their "Community Challenge" project. The land and building, a historical site in Tucson, was obtained from the city. Students learned how to write letters and petition the city organizations to let them develop the land and building. They conducted an archeological dig, categorized and displayed their artifacts, improved the building to serve as an art and artifacts museum for Tucson. They landscaped the grounds using a xeroscaping plan that could be an example for other citizens in Tucson. Students learned about the plants and irrigation required to maintain property in an arid climate. Students, parents and teachers worked together on their project and provided a community service to their neighborhood and the City of Tucson.

The teachers also adapted the "Well into the Future" project at their school. Each student had to investigate a specific health issue and create a presentation of his findings.

One student commented:

"I did a report on asthma. I learned that asthma is a Greek word that is over 2000 years old. I learned that weather and aspirin can cause an asthma attack. I also did a chart on my asthma peak flow meter because I have asthma."

Students and teachers at Visions Unlimited Academy, a charter school in Benson, Arizona adapted "American Heroes" as their first project. They invited a local member of the Veterans of Foreign Wars (VFW) to make a presentation at their school. Students researched and identified history and geography questions they wanted to ask this veteran. They also honored him for his service to America in World War II. Students also studied the United States Constitution, Gettysburg Address, and other important documents that define America. This helped them understand the various branches of local and federal government.

Another career opportunity presented itself as a result of my involvement with all of these schools. Gail Richardson, The CEO of Educational Management Group (EMG, not to be confused with EFG) asked me to train schools, using their satellite training center in Scottsdale, Arizona. This former school superintendent believed that training and workshops could take place electronically and students could interact with others around the globe. This was before Internet chat rooms and video conferencing became the norm. We not only trained teachers, but offered the students an opportunity to learn from and interact with the experts in real time. It was an exciting learning experience for me because I had very experienced young people helping me train teachers from a studio using satellite technology.

CALIFORNIA

Griffin Publishing Group became aware of the multiple learning projects that I have helped schools develop over the previous ten years. They were particularly interested in publishing the Olympic World Project that was developed by a middle school researching the Salt Lake Games. Griffin is the official publishing group for educational materials for the Olympic Games. I subsequently collaborated with them to publish nine books including a co-sponsored book with Los Angeles Metropolitan Water District.

ENGLAND

Several examples of school projects in England, and the 4th EFG conference held in Doncaster, were mentioned in previous chapters. I was subsequently invited by the Barnsley & Doncaster Training and Enterprise Council to work with educators in the Sheffield region. Their major concern was future youth employment with the closing of the steel mills. At the same time Meadowhall, a large regional shopping center, was being built. I met with members of the local

authority, the shopping center developer, other business entities, and educators at Myers Grove School. We developed plans to change the student views of their future careers with some concrete options in the region.

IOWA

Students in Eastern Ave School in Bettendorf, IA adapted the "Highways & Byways" project to study Interstate 80, the highway running through their city. The students identified business, industry, trade and transportation along the highway. They investigated careers represented by those businesses, local and franchises, highway construction, and traffic controls. They determined how the city benefited from this major cross-country transportation corridor.

ILLINOIS

First grade students at Summit Academy in Elgin, Illinois investigated the ecosystem in their local river and compared the information with the surrounding region in Illinois. Students visited the river to collect plants and water samples and presented their findings to an environmental agency. Their teacher, Mr. Fleener, partnered with NBC in Chicago to obtain donated technology equipment and the students subsequently produced a video about this river ecosystem.

I first met a Motorola executive at Summit Academy. He was impressed with his son's progress at Summit Academy and wanted to support my work developing student projects based on high standards and real-world learning. I was invited to bring educators from across the US to Motorola headquarters at Schaumburg, Illinois. We participated in a "Blue Sky" training session followed by tele-conferences to fine tune innovative strategies to further our work. Motorola Foundation subsequently provided a grant for me to train schools in Southern California.

As I continued to work with schools, I recognized the need for advanced technologies and communication tools. These were hard to come by due to budget constraints and limited staff demands. A plane trip provided a valuable meeting. Generally, the business traveler does not talk on a plane. We either have a presentation to prepare or data to analyze and it's a perfect opportunity to get work done. However, I did speak to the man sitting next to me. When he found out what I did he told me he was an attorney for Toshiba. He was working on a settlement for a class action lawsuit that would require Toshiba to donate computers to schools. We exchanged business cards and he contacted me when the Beaumont Foundation of America was established. Contacting this foundation was one of my first priorities when I became the principal of San Onofre School on Camp Pendleton Marine Corps Base.

MINNESOTA

The students at Skills for Tomorrow Charter High School in St. Paul adapted the "Business and Industry Project" to understand the careers that will be available when they graduate, and to identify the skills necessary for obtaining these jobs. They took field studies to various businesses, shadowed and interned at companies, created a resume' of their skills and were "interviewed" by human relations employees from partnering companies. They examined the annual reports of companies and tracked their financial information on the stock exchange.

TENNESSEE

The students at Pittard Campus School, on the campus of Middle Tennessee State University, read information about every native plant in Tennessee. They read information on the Internet, planting instructions on seed packages, plant descriptions in the school and university library, and information available in plant nurseries. Working with college students and professors the students created a nature trail featuring plants native to Tennessee.

Dr. Tracey Ring connected the K-5 campus school curriculum with various departments at MTSU. She commented, "Students understand the impact we have on our land by exploring land use worldwide including urban development, parks, forests, farms and ranches."

A nine-year old student commented:

"We learned that trees breathe in carbon dioxide and breathe out oxygen. Home Depot came and helped us build birdhouses. We used hammers, screwdrivers, and nails, and we wore orange aprons and goggles. The goggles protected our eyes from being hurt. We learned that the hole in the bluebird's birdhouse had to be exactly 1.5 inches because if it's too small he can't get in and if it's too big the house sparrow might get in and take it over. We also built a bird feeder and butterfly garden. We went to Wal-Mart and asked the people in the garden area to help us find the right flowers."

Students were instructed to write a research report of their project. They used proper grammar, punctuation, and writing skills to present project investigations, summaries, interviews, global studies, scientific research, recent conditions or developments, historical information and future predictions. They included an introduction, summary of facts and their conclusions. Many students included maps, graphs and charts to display their research. More importantly, they learned that math and science are fun!

The "Water" project resulted in comments from many of the students:

A girl aged ten reports:

"Our big question was about pollution in the water at Lytel Creek and if you fell out of a canoe, was it safe to swim. We tested water quality and found that the nitrogen tested positive indicating runoff in the water and dirty conditions."

A seven-year old boy states:

"My project was about ocean products and we studied all about algae and food. We made salt-water paintings, a cookbook and book out of a list of products from the

ocean. We presented food from the ocean for the judges to taste. Another group studied the ocean floor and one group studied seals and the sounds they make."

An eleven-year old girl says:

"We gave a Murfreesboro water survey. We set up a computer database to record and present the information. Some of our questions were: 1. Do you think your drinking water is clean? 2. Do you think filtering water is enough to kill disease? 3. Does the world have enough drinking water? 4. Is bottled or tap water better? We graphed the data and percentages on paper and the computer and we presented the information to the rest of the school and some visitors."

An eight-year old boy said:

"Well, you see it all started because we thought we should build a pond. We had some student teachers come and help. We had plants and lily pads to give oxygen. It had to be deep because in the winter the top freezes and fish have to go to the bottom. There's a machine that has a tube that sucks up the water to make the waterfall. If you did not have a pump it wouldn't work. We mostly have gold fish and Japanese Koi fish."

All of these organizations made changes in the way students were being educated. They used integrated projects, portfolio assessments based on content standards, and advanced technologies to link learning to real-world issues. They were assisted by parents and multiple partners to accomplish their goals. As a result, students learned and achieved at a high level. They were also thinking ahead to future careers.



“Education is not filling a pail but the lighting of a fire. ”

~William Butler Yeats

Seven

San Onofre School Camp Pendleton Marine Base

"Time is on our side in continuous improvement."

—Dr. Deming

I mentioned San Onofre School in the last chapter. After consulting for 10 years and traveling around the world several times, I decided it was time to stay put in Southern California. I still had one school to identify for the Motorola grant when I learned that San Onofre School, on Camp Pendleton Marine Corps Base, needed a principal. I was hired for what turned out to be a very rewarding position. The Pre-school through 8th grade school is located on the marine base and serves children from military families. I began this assignment in the fall of 2002, two weeks before school was to start. The Marine Corps and the school knew there would be some type of war in the future as it was post-911. The families were preparing for deployment to the Middle East. At the time there were approximately 725 students, many of whom had special needs. Camp Pendleton is one of the bases where families with special needs students are based.

The previous emphasis at the school was to provide an educational environment that avoided military references. My immediate thought was that we should celebrate the service and work that the military provided for our country. One of the first items on my budget was to purchase a large world map that covered most of the media center wall. We located every Marine base in the world on the map and identified the distance between bases in miles, kilometers and time zones. As a new principal, I needed to "meet" the middle school students' as they were the leaders in the school. I invited each classroom to come to the media center and place post-it notes on all of the locations in the world where they had lived. They also described

one aspect of life in that part of the world. The school librarian used the map for a "read around the world" competition between all classrooms and SOS TV used it for weather reporting and news from Iraq.

A teacher, working with parents, organized another school-wide wall display. They created a tile wall where every family could be featured. Some painted their dad in uniform while others portrayed the entire family including their dog. These were fired and cemented to a entry wall in the school. I remember one day when two young single Marines came to the front office and asked if they could create a tile. They heard about the project from one of their married friends. We said sure, here are the tiles and paints. They diligently worked on the tile for a very long time. It was in honor of a buddy who had just been killed in the war and they did not know any other way to recognize him as a hero. A few weeks later the tile was fired and placed on the wall. About a month later a couple and younger woman came to our front office. They said, "You don't know us, but our son was stationed on this Marine Base and he was killed in Iraq. We wanted to do something in his honor so we are giving these books to every school on the base. We think he would like this." It was the Marines mother, father and girlfriend. When I looked at the name inscribed in the book I was stunned and asked them to follow me around the office to see our wall. I then pointed out the tile on our wall, created by caring Marine friends, and dedicated to their son and boyfriend. Needless to say there was not a dry eye among us. I learned, early on in my time at San Onofre, that military families are dedicated to serving our country, regardless of the ultimate sacrifice.

Technology immediately became a high priority. The military families communicate using the latest technology and it was important for us to mirror this at the school. Using the Motorola Grant and a grant from the Beaumont Foundation of America we were able to change the school from two computer labs to laptops throughout the building. Equity seems to be an issue. I was discouraged by a district administrator from writing the Beaumont grant because it was designed to distribute computers equitably and mainly to schools with disadvantaged populations. I pointed out to my foundation

contact the children in Marine Corps families, with parents deployed around the world, deserved the technology as much as economically-disadvantaged students. We received the grant.

A number of teachers were thrilled with the opportunity to have computers in their classrooms. A few resisted, preferring to drop off their students in the computer lab and have free time. This attitude would gradually change. As a result of the Beaumont Grant we immediately had access to the Toshiba corporate offices in Irvine. They provided computer training for the teachers at the school site and donated additional equipment each time a representative came to the school.

Students participated in video conferences with classrooms across the Marine Base, with docents giving tours at Colonial Williamsburg, and with other students interacting in a 24-hour, world-wide, videoconference coordinated by Ohio State University. The extensive technology and training evolved into a student-produced news program titled SOS TV. The students wrote reports on world news, local news, sports and weather. They also wrote letters to Marines in Iraq, asking them to be reporters from the field. The Marines were asked to write about people, food, living quarters, weather, transportation and other aspects of that part of the world. We received over 180 letters from Iraq; one was written on the back of an MRE (Meals Ready to Eat) package. Another contained sand and others contained stuffed camels and a prayer rug. The students had many first-hand stories to report on SOS TV. Through this experience they learned future TV/ communication career skills, as well as interviewing techniques from reporters who came to the school.

We were eventually invited to take a group of students to the NBC studios in San Diego to view a weather broadcast. I had met the meteorologist on a golf course and asked him if we could bring students to the station. He was thrilled to host them and the students learned first-hand how weather was tracked by satellite and broadcast using maps on green screens. The media was quite interested in getting a story from the base. Fortunately, we were able to work with the Marine Corps to control the news media access to

the school. We approved a local news anchor who interviewed the students and SOS TV students interviewed the anchor, videographer, and satellite truck driver to learn the skills necessary for that type of career. SOS TV was broadcast weekly throughout the school, linked to the Marine Base network and was shown, on one occasion, through the military network worldwide. As a result of the high tech emphasis, the school was awarded the Classroom of the Future Foundation's Impact Award for San Diego County. These technology applications have been incorporated in the "Mass Communications" project.

In addition to the technology integration we scheduled monthly flag ceremonies honoring military people and events. Veterans from previous wars were invited to attend and we had representatives from WWII, Korea, and Vietnam wars present. One of the third grade teachers suggested, "We need a Tuskegee Airman at the February flag ceremony to represent Black History Month." I responded, "Great idea-see if you can find one." I was fairly certain this would never happen. Sure enough, she found one of the airmen in a neighboring town. He came to the ceremony in uniform, was thanked by the Marines for his service, and toured classrooms to discuss the role the Tuskegee airmen played in WWII. He shared, "We did not get credit for our 100% successful flying missions because the common belief was that black people were not smart enough to fly." He was speaking to a totally integrated room of black, brown and white students whose parents work side by side in today's military. It was an amazing day for everyone.

Because 90% of the fathers and a few mothers were deployed to Iraq, we decided to send cards and packages at Thanksgiving and Christmas. Local businesses provided gifts; the younger students made cards and the older students assembled the packages. Three teachers also organized a choir to sing at the local Memorial Day celebration and at the dedication of Park Sempre Fi in San Clemente, California, where they performed with the Marine Corps Band. During the first school year families were anxiously experiencing the first of many deployments to Iraq. I decided to schedule a family dinner. The teachers were skeptical because they thought the town

Seven: San Onofre School, Camp Pendleton Marine Base

did not care or even know about the school. They also thought no one would help with such a big undertaking. San Clemente came through with multiple restaurants and a deli donating food. Two stores donated paper goods, a service club donated money, Coca-Cola donated soft drinks, and the San Clemente Presbyterian Church served the dinner and cleaned up after. Over 500 Marine family members enjoyed a free dinner and listened to the school choir sing patriotic songs. Many Marine/civilian family partnerships were formed. Subsequent family dinners were sponsored by the San Clemente Presbyterian Church working with the employees of the San Onofre Nuclear Power Station with donations from Con Agra Foods and restaurants in town.

It was an amazing time for partnerships. All of the students received backpacks filled with school supplies. Field trips were sponsored by businesses and the school received donations of books and supplies. All I had to do was provide an idea and partners were there to help. Students attended Angel baseball games, and went fishing on sport fishing charter boats. The school received a PTA Golden Bell Award for Partnerships and the students and families benefited immensely from community support.

As you can imagine these changes were not fully appreciated by a few teachers, who preferred the "old" ways of doing things. On my second week on the job one teacher stated, "We eat principals alive." At the time I did not know if this was a warning or just general information. I responded, "We can't taste very good, I don't know why you would want to do it." I found out a few weeks later when I dismissed an unsatisfactory substitute teacher from a classroom. The teacher sued the district and me. The same few teachers joined in and wanted "me" fired. They proceeded to intimidate new teachers and vilify my actions. The subsequent trial in Superior Court with the charges dismissed did little to change the minds of the few. The amount of time to answer the charges and the time away from school during the trial was a waste of my time and taxpayer dollars. This was not only my time, but the Superintendent and district administrators were also called to testify on behalf of my actions. It should never have gone to trial in Superior Court! It also shortchanged the students during an all school Olympic Games

event happening at the same time. The good news, the staff was no longer bullied by the vocal few moved forward with more innovative programs. Additional training, monthly classroom observations, and district/community/state recognitions, reinforced the need for innovation and continued student centered instruction in the classroom. By the way, the teacher who warned me was, and is, an outstanding teacher.

I am sure you are wondering, what about test scores? While a federally elected official made disparaging remarks about the intelligence of the military, I knew for a fact that our students were smart, responsible, well behaved, and wanted to learn. Cross grade level teacher teams analyzed curriculum, standards, test scores and instructional strategies. Intervention programs and gifted instruction were expanded. Standardized test scores improved over 50 percentage points at every grade level, resulting in the highest test scores in the district and on the military base. More importantly, the students were learning real-world skills and celebrating the role their families were playing to protect our country.

Many teachers implemented innovative programs from the middle school Science Exploratorium where scientists from SONGS (San Onofre Nuclear Power Station) judged student projects, to elementary tide pool investigations at Crystal Cove State Park. From computer-based intervention programs for remedial students to tree planting ceremonies on the campus; from participating in Academic Decathlons to "Got Facts", a math competition, the students were challenged to master high-level skills. Another applied learning opportunity happened in the fourth grade "Just Cookies" company, where students created a business plan, estimated the number of cookies they needed to sell to raise enough money for an overnight ocean trip, and determined the number of customers in the school and the number of sale days. They produced a TV commercial for "Just Cookies" that was shown on SOS TV throughout the school. When the students reached their profit goal they "leased" the business to another class who took it under "new management." Another teacher and classroom partnered with the Medtronic Foundation to study health and fitness. They used pedometers, tested blood

Seven: San Onofre School, Camp Pendleton Marine Base

pressure, and dissected heart valves to study health issues in relation to fitness. The students also researched the heart valve work at Medtronic Corporation and created a CD of their investigations for the corporation.

Parents and community volunteers played a huge role in the success of the school. They were always looking for ways to expand student learning. One of the opportunities was *Terrific Tuesday* when students could stay after school and receive tutoring, join clubs, sing in choirs, perform in musicals, and participate in sports. Numerous volunteers were necessary and again, I called upon the San Clemente Presbyterian Church and the community of San Clemente to offer this assistance. A dedicated teacher/Marine Corps wife volunteered to help coordinate the program at the school site, ensuring continuity between students' needs, classroom teachers' plans, and the volunteer work. This excellent teacher received a pink slip every year because she had changed districts, due to her husband's military assignments, and did not have tenure. This did not limit her commitment to kids. Today there are over 35 volunteers who tutor, mentor and lead clubs every Tuesday at San Onofre school. In addition this program has been replicated at four additional schools in San Clemente.

Another San Onofre teacher volunteered to train the in-town tutors, preparing them to use a computer program at the other school. This is another example of professional collaboration. I was pleased to hear the Capistrano Unified School District superintendent address the tutors at the end of year celebration. He said that many schools would not allow "church folks" into the building. He thanked the volunteers for helping the district teach the necessary content standards and organizational skills. The Fallbrook Union Elementary School District Board of Education and Superintendent of Schools honored our volunteers for the work they did and do at San Onofre.

I recently had a Facebook contact with a former student who is now a freshman at UCLA. Marine kids use technology to stay connected and I look forward to hearing from others living around the world. This school continues to be an excellent school and just received the California Distinguished School designation.

This was my most rewarding job! Serving families who serve our country is a high honor, and I was very fortunate to spend four years working with the United States Marine Corps. Connecting the curriculum to the life of the student and the family experiences significantly improved learning. The massive number of partnerships expanded the technology capabilities. Parents were actively involved in the school and the K-8 configuration supported multi-age learning.



Eight

It's Your Environment!

"I wanted to say that a two-minute shower takes 20 gallons of water but a ten-minute shower takes 100 gallons! I'm working on taking shorter showers."

—Brice (age 9)

After retiring for the second time in 2006, I determined that I wanted to create a non-profit web community where students could share applied learning and integrated projects. *It's Your Environment, Inc.* a 501C3, non-profit corporation was formed and the website was launched. Board members are a diverse group with representation from a university and business, legal, technology and medical fields.

It's Your Environment's website is an eco-educational online community where schools, classrooms, students and youth groups collaborate with eco-conscious business, university and community organizations to investigate environmental challenges and sustainability, conduct community service projects locally and globally, and share their projects online for others to replicate or localize for their organization and region of the world. Each school has a fundraising webpage for parents and partners to donate to the projects and technology supporting scientific investigations. IYE has partnered with the Irvine Ranch Outdoor Education Center to provide hands-on environmental investigations for individual students, classrooms, scouts, and families. Toshiba and Con Agra Foods provided donations for the winners of the online environment fairs.

This website emphasizes hands-on project-based learning to investigate all aspects of the project. Students understand the ecological issues in the world and the scientific discoveries that are taking place every day by using scientific investigation that creates experiments, makes models, plants gardens, analyzes water quality, identifies sources of energy and aids in the

understanding of health and wellness issues. Students integrate math, science, biology, botany, chemistry, geology, meteorology, and physics in the manner that it is integrated in the world. Technology is used to research up to date information, verify data, and present projects. Two online environment fairs have resulted, with the following winners:

The 5th grade students at Vista del Mar Elementary in San Clemente, California, researched a variety of environmental issues, both on a global and local level. From the debate on global warming, to rainforest deforestation, to technological advancements in desalination, teams conducted Internet-based research, as well as hands-on investigations to answer questions that arose. A number of projects are still in progress and the school posts all research on their website for other students to learn and adapt at their school or in their community. The teacher and his classroom received a Toshiba Tablet Computer for their efforts. This "professional" educator, when faced with a teachers strike in the district, organized community field trips for all of his students. Working with parents, he met his students at a predetermined location outside of the school so that learning could continue during the strike. He demonstrated dedication as a teacher, by recognizing, it's the kids!

A classroom study at Pittard Campus School in Murfreesboro, Tennessee, centered on the Flat Rock State Natural Area. The students visited this glade several times to identify endemic and common plant species. Some of these are found ONLY in Rutherford County. Each child chose one plant and they became experts on these plants and the zones of the glade. The students also continued to maintain the "Rescue Glade" on the Campus School Nature Trail, established by previous classes. These plants were rescued from glades in construction areas. The class interviewed Milo Pyne who discovered Pynes Ground Plum, a plant endemic only to Rutherford County. He went with the class to Flat Rock Cedar Glades. They met with Bertha "grandmother of the glades," who presented a slide show and taught the students about the importance of protecting the glades. They also met with a professor from the Biology Department at MTSU to hear her knowledge about the glades. Students created a Cedar Glade informational booklet as well as

their Web page. Outdoor projects included installing self-made bird houses around the school yard, constructing and maintaining a nature trail in the school yard, planting flowers and vegetables in the green house behind the school, planting and taking care of the flowers in front of the school, planting one Russian Birch tree and one Chinese tree in the school yard. Club members, wearing T-shirts with the eco-kids logo, took a field trip to The International Fest to Raise Global Awareness of Environmental Issues held at Dollywood. Another class traveled to Tremont in the Great Smoky Mountains National Park. The Tremont staff taught the students about conservation and being stewards of our environment. As a result the students decided to inform their own community by designing an awareness campaign to encourage local businesses, civic organizations and government groups to use native plants when landscaping. It's the kids who took the action.

Truman Benedict School in San Clemente, California, led by their PTA members, began a school-wide recycling program. The Truman Benedict Principal, teachers, administrative staff and custodian actively participated and provided ongoing support and encouragement to students and volunteers. The school partnered with many organizations and the students collected a record number of cans and bottles. This program was one of the first in California and has been going on for several years. The money raised is used for special programs for the kids. Unfortunately, the students learned a real world lesson. Recently, when the recycling bins on the school campus were opened, over half of their collection bags had been stolen. The students were competing for a state environment award, so the local newspaper featured their problem and encouraged local business and residents to make up for the loss by taking recycled bottles and cans to the school. One of the students said, "We've worked so hard, and then someone just comes and takes all our pride from our school."

San Onofre kindergarten students investigated the tide pools at Crystal Cove State Park. Students identified tide pool inhabitants and rules for visiting tide pools. They investigated many sources of information and posted these on their Web page for others to learn about tide pools.

The Earth Day Celebration at Bathgate Elementary School, in Mission Viejo, California, was an opportunity to showcase the student's environmental research exhibits. Projects were completed by individual students, teams and classes at every grade level (K-5). Twenty-two classes provided information on various environmental topics including water cycles and terrariums, acid rain and its effect on plants, oil spills, global warming, water and air pollution, rainforests and endangered animals, as well as extensive information on recycling, garbage and landfills. The PTA coordinated speakers and events representing the environmental interests of the school, community and southern California. A representative from Waste Management talked about recycling. Hiking and park rangers from Riley Wilderness Park, a local hiking and educational center, spoke about indigenous animals and their adaptations for survival.

Another popular event was Recycle City. Home Depot sold drought-tolerant plants and offered free consultations about how to make homes energy efficient. The Ocean Institute and Surfrider Foundation both encouraged consideration of the coast and local beaches. The Santa Margarita Water District taught about the water cycle and water conservation. As I watched from a safe distance, the Irvine Ranch Outdoor Education naturalist showed snakes to a group of students.

IMSA Go Green is a project that will feature many student investigations and service projects. Established by the State of Illinois to develop talent and leadership in science, technology, engineering and mathematics (STEM), the Illinois Mathematics and Science Academy (IMSA) has become an internationally recognized, world-class powerhouse in public education. Through their dedicated collaboration of students and faculty and their newly-founded Energy Center, IMSA is changing the way Illinois views the environment and energy consumption. IMSA students, working on the bio-diesel project, investigated the process of converting a diesel engine to run on the grease produced by IMSA's foodservice provider, Sedexhol. To demonstrate, students built a mobile energy house. This house is small enough to attach to the back of a car allowing it to travel to different schools.

The house features many different forms of alternative energy including solar power and wind energy. When the house is finished, students will showcase it for demonstrations, and to inform others about alternate energy! At their annual "Junkyard Wars" competition teams of students were given one trash bag full of "junk." From this "junk" each team made something new in a limited amount of time. Projects ranged from clothing to art work.

LORAX, IMSA's environmental club, received the EPA Youth Award for its members' dedication to the GoGreen Movement. IMSA has been named a 2009 Intel Schools of Distinction winner, taking the top honor for "science excellence" at the high school level. Each year, only one high school in the nation is the recipient of this prestigious recognition. I was very impressed when I entered the school and heard the curricular opportunities described by Dr. Max McGee, President of IMSA. However, it was amazing to watch the students, carrying their Toshiba tablets, interacting with others about their school work, the kids were totally focused on learning, in every part of the building. They were also very willing to share their accomplishments with this stranger that showed up on their campus!

In Irvine, CA Lakeside Middle School students working with Anaheim High School Transportation Academy students, in partnership with the National Fuel Cell Research Center at UC Irvine, investigated transportation using fuel cell energy. UC Irvine researchers are doing some cutting-edge work on hydrogen-powered cars, which could be commercially available in a few years. Students from both schools, working in teams with graduate students at the University, participated in the Explore the Hydrogen Future fueling caravan, held at the UC Irvine fueling station. It was fun to watch them interview manufacturers and learn how fuel cells work in automobiles. It was obvious to me that the science was interesting but the sporty cars were a big hit with the kids too! They observed cars being fueled from the following automobile companies: Honda, Hyundai, General Motors, Nissan, Mercedes, Toyota, and Volkswagen. Students also heard presentations by key legislators and Dr. Scott Samuelson, Director of the National Fuel Cell Research Center, NFCRC.

The students at Marblehead School, San Clemente, CA changed the method of getting to school. Automobile traffic had significantly increased at Marblehead as a result of district budget constraints and a limited number of busses. Public transportation is not available in this area. Students investigated this traffic issue in regard to environmental and health concerns and launched their WalkPool. The students and teachers/administrators significantly limited the number of automobiles that came to school each day, improved air quality, saved energy, and established healthy lifestyles by walking to school. The students recorded their plans of action, described their methods of communication, and shared their data collection/analysis on their classroom page. Other students may want to localize this project in their part of the world!

These projects were all conducted within the school day. Administrators, teachers, and parent volunteers guided students during school time to study environmental issues relevant to their part of the world. In some cases the information came from a textbook. But many sources of information were found on the Internet and by interviewing people in the community. Some involved after-school activities to support the in-school work. The kids were applying standards and skills in meaningful projects.

The after-school Environment Club at San Onofre School, Oceanside, California, has developed a Green Team site to explore the challenges that our environment is facing, as well as offering solutions for the growing problems that affect us all. This webpage is a reflection of interviews, community service, Internet research, and investigations into health issues, pollution and energy conservation.

Association House Out-of-School-Time Recycling Program, serves the youth of the Greater Humboldt Park community of Chicago. The two different programs, LISTO for youth 6-12 years old, and Teen for youth 13-18 years old, combined to begin an agency-wide recycling program operated by inner city kids.

Thirty-four Title I students at Del Obispo School in Dana Point, California, answered the question "Is the San Juan Creek responsible for

polluting Doheny Beach?" Students tested the water for bacteria levels and picked up trash throughout the year. The students asked the question "If the San Juan Creek is not responsible, then who or what is?" "Maybe it is a combination of factors." The students found out! They worked closely with the South Orange County Surfrider Chapter, as well as the Ocean Institute located in the Dana Point harbor. Students made regular trips to the harbor, investigated information online and participated in the monthly eco-quiz and activities. They created PowerPoint presentations, videos, reports and graphs analyzing their data.

Students from Irvine Unified, Newport Mesa Unified and San Onofre School participated in a video documentary of Crystal Cove State Park and the newly restored cottages. Working with a student video team from Chapman University, and park rangers, the students prepared questions, conducted interviews with experts and Crystal Cove Alliance members, and enjoyed several visits to the cove. While the final product was not broadcast quality, the learning was exceptional.

These projects were conducted after the school day by dedicated teachers desiring to enrich student learning by connecting subjects and standards to real world issues.

Fourth Grade students, also at Bathgate Elementary used their school recycling money to build a "clean water" well for Nkhoma Village in Malawi, Africa. Last summer, the teacher traveled to the village in Africa, and representatives from Malawi had the opportunity to visit the school in Mission Viejo, California, to say "Zikomo" meaning "Thank you!" This class used a large map of Africa as the backdrop for their recycling project. The kids learned how water bottles can be recycled at home to create clean water for others around the world. The geography lessons integrated in this project were awesome. These projects were dedicated to helping others. Students went well beyond their classroom learning to raise funds for locations around the world. Think of the geography they learned in the process!

In Somerset High School, Somerset, WI "Empty Bowls" project, students gathered information and generated projects including musical numbers,

sign language performances, readings, artwork, and informative posters and PowerPoint presentations to promote awareness of world hunger and what can be done. Students created ceramic bowls and planned a community event on March 26, 2009 to share their projects with the community and to raise funds to donate to Heifer International and Grace Place, a local shelter. Over \$1,600.00 was raised in this project. The kindergarten students at Somerset Elementary School decorated reusable market bags for the local grocery store to customers. I worked with this school district on numerous occasions and was very impressed by the forward thinking superintendent and the administrative staff. They have assembled a large number of business/community partners to support real world learning. The teaching staff collaborates across grade levels to challenge the students. I recently received a power-point presentation from a student describing the solar energy installations in the district. The topic was thoroughly investigated and presented in an attractive and informative manner.

In November 2008, the San Clemente Garden Club partnered with Concordia Elementary School PTA, teachers and staff to establish Learning Through Nature: A Butterfly Habitat School Garden. The hands-on Junior Gardener program was designed by a PTA officer and garden club member to tie directly into the science curriculum for each grade (K-5). In addition to a primary focus on 2nd grade curriculum about life cycles, the program involves other grades in garden based science projects including: Rainwater Harvesting through recycled rain barrels (5th); Worm-Bin Composting Vermiculture (4th); California- Friendly & Native Plant Butterfly Habitats—drought-tolerant (3rd); Native American/Butterfly Habitat Garden (3rd); in-class butterfly habitats (K-2nd); and Butterfly Habitat Garden/Vegetable Seed Garden (K). The focus on habitat and water-wise gardening has spread school wide. In addition to Concordia parents, PTA, and Garden Club, class-based science projects have also drawn volunteer support from the San Clemente Art Association and a local retired teacher with a specialty in Vermiculture. The garden is an important extension of Concordia's new Paleontology Park and Science Discovery Center, centered on Project Splash,

a 4-9 million year old fossilized whale bone. The park is expected to draw visitors from other schools, creating endless learning opportunities.

In January 2011 Marblehead School began developing their school gardens. Teachers and parents attended a workshop session conducted by the Concordia school PTA officer and decided to create similar gardens on their campus. Weekend work days by the teacher coordinator, parents and students included preparing the land, building the flower beds, bringing in dirt, and planting.

Gardens provide hands-on scientific learning and math applications. Both of these projects were the result of committed parents working with the school staff to enrich learning within and beyond the school day.

A summer team of gifted students, attending Castille School in Mission Viejo, California, investigated an environmental issue, conducted a community service and created PowerPoint presentations of their work. Since it was summer and school was not in session, the students researched and blogged from home.

Here are some sample student blogs:

"Hi it's Brice and I wanted to say that a 2 min. shower takes 20 gal. of water but a 10 min. takes 100 gal. of water!"

"Just so you all know, I am going to research mandarin ducks for my report. They are the most colorful ducks on earth. And they originate from China. I can't wait to find out more! Quack Ya Later! Kelly"

"My Dad stopped watering our grass - I think we have saved so much water it's amazing! The bad news, we have no grass...Mom isn't happy about the situation. Neither is Lancelot, my Saint Bernard! It's funny, but we really have saved H₂O!"

"Hi, it's Sophia. Last night I researched Doheny Beach and found a beach report card. This "report card" grades all of the beaches on how polluted

they are. I am sorry to say that Sunset Beach, Muddy Creek Beach, and El Morro Beach were the only beaches that received all A pluses out of 104 others. I am also very disappointed to say that Doheny Baby Beach was given all F's. This beach is constantly polluted and is exposing chemicals to all the children that visit there!"

Students and their teacher met on Fridays in the school computer room to share research, prepare presentations and post information on the website

Technology allowed these students to continue learning during the summer. Fortunately the school allowed them to use the computer lab on one day of the week. The teacher's stipend was paid by the parents and the students learned at a high level.

As you read these great learning examples you will realize that a number of them happened outside of the regular school day. Unfortunately, in many schools there is no time for applied learning addressing real-world issues. Some do not understand how standards-based portfolios of work can accurately measure student knowledge. Instead, the learning is driven by textbook instruction and standardized tests. Fortunately we have innovative teachers, parent volunteers and business/community partners who want to expand student learning beyond the textbook and school day to make education relevant to the issues of today and the future. Yet another 2030 concept!!



Epilogue

Learning Extending into the Future.

*"Instead of, 'It can't be done because...'
Think beyond what can't be done and do it anyway!"*

Consider this: You just started a new job. When you arrived at work the front office asked your age. You responded, 35. The supervisor pointed you to the room where all the 35 year olds work. You were then assigned to a project. You would have liked to talk with others who were working on the same project, but that was not allowed. You knew there was an older person in the company who could provide valuable assistance. This person could not work with you because the materials he was using were deemed to be too hard for you. The computers were all in one room. You were allowed 45 minutes access to these on three different days of the week. However, on many occasions, you worked on a different project using the computers. As a result, you could not make progress on your own project. You were hired in April and, at the end of May, you were really making progress on your own project. You were amazed when they told you the business shuts down for the summer.

Many schools today continue to operate in this outdated manner. Students see no connection between school and the rest of the world or their future. Dr. Paul Brandwein once said to me, "There is nothing so unequal as the equal treatment of un-equals." He encouraged us to find a gift or talent in every child. The overriding issues of equity and district policies standardizes learning at a "C" grade. My view, 'the real leaders are risk takers and find a way to transform education for their student population.' We continually see examples of outstanding student results. After all, it's the kids who deserve

a quality education!

The educators and schools in this book represent every type of school and learning organization. They demonstrated an early understanding of the learning needs of students in the 21st century. These can be summarized in six categories:

1. Content standards and subjects applied to up-to-date, real-world issues.

The examples in this book demonstrate that investigative, applied learning significantly improved student achievement AND increased test scores. The students were motivated to learn! They WILL surprise you when they are turned on to learning and see a connection to what they are doing in school and the rest of their lives. They read at a higher level, apply math to economic issues, connect history to the present and future, use science skills to understand the world's ecosystem, and read and write to effectively communicate their investigation of various solutions and viewpoints. Students develop an appreciation of the cultures of the world and the role they play in preserving and protecting the planet. They also learn how the world works, developing an understanding of future careers.

2. Competency is measured with student-created portfolios of work.

Student achievement is measured quantitatively and qualitatively. Standardized tests are required. The examples in this book relied on mastering a high level of content standards and core skills and applying them with a student produced portfolio of work. These compilations accurately measure student thinking, investigative skills, knowledge of a real-world topic, and presentation skills using correct language and communication technologies. Students learn at an early age to create a resume of their work and a record of their service projects. The culminating written reports demonstrate communication skills well beyond grade level expectations and the maps, graphs, charts, power points, videos, blogs, showcase a knowledge of the world.

3. Organizational strategies represent the world today and tomorrow.

Students are in multi-age groups working year-round. Learning takes place within the school day, in after-school programs, during summer institutes and in field studies beyond the school. The structures and calendars of yesterday must be modified for today and the future. The examples in this book include school choice, year-round calendars, multi age grouping of students, learning inside the school day and outside in the community. Facilities were modified to “facilitate” learning and encourage teamwork.

4. Advanced technologies are integrated in the learning process.

This book is filled with examples of teachers and students integrating the “latest” technology available at the time. In every case it was a huge “stretch” for the teachers! Most of them were working outside their comfort zone—but the kids were perfectly comfortable with every technology. In many cases, it required a grant or a private sector partnership to obtain the technology tools and training. Schools must push ahead to incorporate the latest technologies including hand held devices for all students to access textbooks and other up-to-date learning materials. Communication and information access is growing exponentially and students must be able to function and compete in a technologically advanced world. This requires a teaching staff incorporating the latest tools in the classroom and beyond.

5. Educators are hired and fired based on student achievement.

Several examples in this book highlight the difficulty of removing a failing teacher or administrator. We can no longer allow unions to protect the incompetent and unwilling. Tenure needs to be replaced with: Internship—renewed annually based on performance; Probationary—renewed after two years based on performance and student progress; and Master Teacher—renewed every five years based on performance and student achievement.

Teachers must be formally evaluated in the classroom several times each year. Each evaluation must be documented for use in the renewal process. Outstanding teachers can fast track to the Master Teacher level but they still need to be evaluated based on student achievement. Salary is based on student performance and not seniority, and teacher responsibility, not years on the job. Merit pay is mentioned frequently. If this is called "merit" pay it must be based on student achievement, not an extra job assigned by the principal. Administrators are evaluated based on teacher supervision and student achievement.

If this or a similar plan is instituted it allows time for a teacher to fully develop the skills necessary to become an outstanding educator, but protects students from incompetent instruction. We have spent a huge amount of money and time on professional development programs coaching teachers to collaborate on curriculum, work together and feel good. It's time we held them accountable for student achievement. The *Professional Learning Community* concept is working to accomplish this today. If a company made some inferior product that did not work properly and was not globally competitive it would go out of business. In education the product is the kid. We must provide a superior educational program for every child or our country goes out of business.

6. Parents are involved at school and in the education of their child.

In every example in this book parents played a key role. Where the parents are involved, students understand the importance of education and the teachers have a valuable resource in the school, home and local community. When teachers understand the needs of the parents and families they can better educate the child. Parents know when something is not working and educators should "hear" their concerns. School choice by parents was featured from 1975 to today and is powerful when it comes to educational transformation for the future.

7. Private-sector partnerships are crucial in preparing students for life, work and citizenship in the 21st century.

This book features multiple opportunities for private sector partnerships. These “partners” connect student learning to real-world skills and future careers. There are no limits to the meaningful activities developed by a school collaborating with the corporate, business, community, university, and faith based partners.

IN SUMMARY

We desperately need an educational paradigm shift of major proportions. This book provides a history of schools and programs designed to prepare students for the start of the 21st century. It represents the dedication of gifted educators working in every educational setting imaginable. They demonstrated courage and leadership at the local level. As I stated in the Prologue, we now need a “2030 Prep” mentality. “2030 Prep” can take place in the entire school, in a cluster or academy at the school, in an after-school program, in a small group led by a volunteer, or a summer institute. It can be in a rural area or an inner city location with any every type of student population. It can be a public, private, charter, parochial or home school—anyplace that can remove the barriers and improve education. The students in this book represent every culture, different languages, and a wide range of socio-economic backgrounds. Some have special needs, some are gifted, and all achieved above expectations.

There are examples in this book describing parents and partners working with motivated teachers to provide learning options beyond school. The world is changing at a rapid rate, and a four-year college degree is being replaced by life long learning and re-training, particularly in the fields of science, technology and economics. We must prepare K-12 students for this new reality.

I applaud the foundations and individuals who are stepping forward to invest millions of dollars to significantly reinvent education. However, we must keep in mind that educational excellence for the 21st century is not always about more money. It's also not about protecting the unions and government bureaucracy. The examples described in this book show that there are many innovative and highly competent educators willing to collaborate with parents and other partners in order to significantly improve student learning. The one thing we must keep in mind—the foremost thing—is education is all about children. It's the kids!



Appendix A: People

21st Century Prep Original Staff

Dr. Charles Babbb
William Baker
Leslie Bannier
Elizabeth Barden
Kathy Bari
Joel A. Barker
Bruce Baron
Anne Batty
Ron Berg
Todd Bergman
Kirk Bergstrom
Dr. Tom Bibler
Bill Billingsley
Dr. Paul Brandwein
Michelle Brislen
Dave Brown
Doris Carpenter
Woodrow Carter
Larry Cassidy
James "Mike" Choate
Cindy Cliche
A Stanley Corey
Dr. Ruth Cox
Stephan Covey
Judy Cunningham
Russ Donnelly
Rosa Drew
Alan Due
Jodi Dufour
Kris Ethington
Jennifer Ezell
Irene Fascher
Richard Field
Maria Flaherty
John Fleener
Marrie Lasater
Megan Leech
Kim Lusenhop
Kathleen Gange
Terry Garner
Robin Gibbs
Joseph Golden
Karol Gottfredson
Bryan Gunner
Dr. Nick Hallet

Sally Helgesen
Bill Honig
Todd Horton
Lisa Jacobson
Sarah Jayne
Dr. Margaret Jorgensen
Emily Just
John Karachi
Jolena King
Julie Kosinski
Barbara Lachel
Barbara Langley
Megan Leech
Susan Luna
Jennifer McConnell
Herbert McCray
Dr. Max McGee
Ellsworth McKee
Ellen Manaker
Mike Matheson
Dan Merenda
Dr. Rebecca Montano
Nancy Moore
Bruce Mueller
Dr. Warrington Parker
Ed Peacock
Lt.Col Sam Pelham
Aimee Plette
Phillip Pizzuto
Darren Platt
Elaine Plemons
Becky Podlin
Bob Polkinghorn
Mike Pupius
Dr. Harry Reynolds
Linda Riccio
Gale Richardson
Karla Riddle
Dr. Tracey Ring
Randy Rosberg
Mary Roosevelt
Sue Rosenberg
Randall Rowan
Debbie Ryder
Dr. Kim Sadler
Sam Ginn

Appendix B: Schools, Colleges & Universities

2st Century Prep / Academy, TN
Acequa School, ID
Association House, IL
Anaheim Transportation Academy, CA
Bathgate Elementary, CA
Bellflower High School, CA
Birds Hill School, Canada
Carrillo Intermediate Magnet School, AZ
Castille School, CA
Concordia, CA
Del Obispo School, CA
Eastern Ave School, IA
El Cuarto Año High School, IL
El Sol Charter School, CA
Florida Conference Seventh Day Adventists, FL
Hoku'ula Homeschool, HI
Illinois Math and Science Academy, IL
International Partnership Network
Joliet High School, IL
Lakeside Middle School, CA
Marblehead School CA
Minedoka County Joint School District #331, ID
Mt Edgecumbe High School, AK
Myers Grove School, UK
Pittard Campus School, TN
Rawthorpe School, UK
Robinson Elementary, FL
Royston Comprehensive School, UK
Sabin Magnet School, IL
San Onofre School, CA - Camp Pendleton
Silver Creek High School, CA
Skills for Tomorrow High School, MN
Somerset School District, WI
Summit Academy, IL
Thomas Elementary, AZ
Thomas Edison Elementary, CA
Treasure Mountain Middle School, UT
Truman Benedict Elementary, CA
Tucson Unified, AZ
Twin Lakes Elementary & Middle, FL
Vaughn, TX
Visions Unlimited Academy, AZ
Vista Del Mar, CA
Vista Verde, CA
Washington County Union School District, NC
Yupit School District, AK
Chapman University, CA
Doncaster College, High Melton,
United Kingdom
Florida Community College,
Jacksonville, FL
Grand Canyon University, AZ
Judson College - IL
Idaho State University
Middle Tennessee State University
Northern Arizona University
North Florida University
Pepperdine University, CA
University of Alaska
University of California, Irvine
University of Tennessee,
Chattanooga, TN
Virginia Tech

Appendix C: Private Sector Partners

Apple Computer
Association of California Administrators
Beaumont Foundation of America
British Regional Railways
Chattanooga Manufacturers Association
City of York England
Con Agra
Crystal Cove Alliance
Crystal Cove State Park
Educational Management Group
Educational Testing Services
Erie Area Chamber of Commerce
Fluor Corporation
Griffin Publishing Group
Home Depot
IBM
International Partnership Network
Irvine Ranch Outdoor Education Center
Irvine Science Alliance
John Thomas Group
Kiwanis Clubs
McKee Foods Corporation
Marriott Hotel
Medtronic Foundation
Metropolitan Water District of Southern California
Motorola Foundation
Murfreesboro Chamber of Commerce
National Association of Partners in Education (NAPE)
NBC
New Zealand Principal's Conference
Orange County Performing Arts Center
Pacific Telesis Foundation
Rockwell International
Rotary Clubs
San Clemente Presbyterian Church
San Onofre Nuclear Power Station
Southern California Edison
Surfrider Foundation
Tennessee Aquarium
Tennessee Valley Authority (TVA)
The Irvine Company
Toshiba America Information Systems, Inc
Veterans of Foreign Wars (VFW)
UC Irvine Partnership Network
US Marine Corps
Wail-Mart
Weyerhaeuser
Will County Chamber of Commerce
W. L. Gore & Associates

Appendix D: Projects

EFG PROJECTS:

Balance in Ecosystems
Business & Industry
Community Challenge
Design & Build
Energy
Global Economics
Highways & Byways
Mass Communications
Native Cultures
Olympic World
Small World
Time & Space
The Arts
Water
Weather Patterns
Well Into the Future
World Food
World Travel
Your Land My Land

2030 PROJECTS:

Land
Water
Energy
Business
Economics
Health
Community
Communications
Travel

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