

VITAL LIVES

A man with grey hair, wearing a black suit, is seen from behind. He is holding a black marker in his right hand and has just finished writing the words "VITAL LIVES" in large, red, hand-painted letters on a grey wall. His left hand is tucked behind his back.

Analysis And Solutions To Critical Issues
Facing The American Education System

Second Edition

Edward F. Berger Ed.D.

**Analysis and solutions to critical issues
facing the American education system.**

**Adapting to the forces that have made
much of what we believe about schools
and education irrelevant.**

**Written as a format for national
discussion.**

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1. Educational change and development
2. Technology and the future of education
3. The Information Age
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5. The privatization of public education
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7. The death of comprehensive schools
8. K-12 Interdisciplinary Comprehensive curricula
9. Evolving America to the next level of leadership
10. Utilizing virtual resources
11. Defining the schools and teachers necessary in the 21st Century

You Know Best

The success of this book depends on you. If you appreciate it and think the people you know, respect, and care for will as well, please recommend it and spread the word. That means telling your friends about it, tweeting about it, blogging about it, suggesting it on Facebook, writing reviews, quoting from it and sharing your favorite parts through social media and word of mouth.

I also encourage you to reach out to me directly and to share with me how the book affected your views, thoughts, and approaches to education.

Sincerely,

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This work is testimony that each one of us can help create a new education system as we comprehend the ideas and possibilities needed for the 21st Century. I write this book as someone who is making the change from old to new in my 70s, after more than 50 years in the old system. Embracing these challenges can be difficult and daunting, but it is well within the realm of the possible and comfortable for those who hold a passion for learning.

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Introduction: Setting the Stage

Never before in the history of humankind has there been a time when access to knowledge has advanced so far in such a short span of years. In less than a decade we have entered the *Information Age*¹ and the *Interactive Age*.² Relatively small groups of digitally capable individuals have provided options and directions for the pursuit of knowledge and human interaction beyond our imagination. Some of what we have learned is valid and must be brought forward, but much of what we have done in the past cannot continue if we are to keep the American Dream alive. Our educational systems, grounded in 19th and 20th Century models, are failing our children and our nation. Where they were once innovative, they now hinder the innovation they fostered.

This book explores areas of weakness in our schools, provides examples of what needs to be changed, and gives examples of how this change can occur. It discusses the historical basis of the current system, political obstacles to change, and examples of re-structuring instructional delivery systems (how we

¹ The Information Age formed by capitalizing on the computer and micro-miniaturization. The Information Age has allowed rapid global communications and networking to shape modern society.

²The use of the term Interactive Age evolved from those who wrote about options for human interaction in the Information Age. It was chosen as the name of a peer-journal, *Interactive Age*, printed twice-yearly for an audience in the video game industry. The advancement of complex interactions due to the internet and world-wide-web is responsible for major changes in the way we communicate. Programs based on old limited interactions are now obsolete.

teach) that incorporate the new technology. It also provides examples of changes to the system that incorporate the learning styles and educational needs of 21st Century digital learners.

The widespread adoption of the internet has revolutionized the way we communicate, do business, and consume information. Despite these sweeping changes, our education system has yet to identify and create new methods for educational delivery capable of taking advantage of the wealth of options the internet and virtual space provide.

Digitally literate learners are forcing the creation of new *operating systems* for the acquisition and application of knowledge. Schools are frozen in the past and in their current structure cannot meet the needs of 21st Century learners. They are serving learners of all ages in the same tired, traditional way carried forward from the industrial revolution and the factory system.

Technology has changed the way things work and the potential of what is available: Web 2.0, YouTube, free open source courses, Wikipedia, avatars, multi-player immersive gaming environments, Twitter, Facebook and... These developments are forcing the redefinition of classroom environments and transforming learner management models.

American institutions are not prepared for the transition. Generational differences that divide the past from this new present are so extreme that those with pre-digital, pre-*Information Age* mindsets must replace their outmoded literacy with new information, or fail. If enough fail, America will not generate the educated populous necessary for economic growth,

progress, and leadership. America will fail to be competitive and well-educated enough to enjoy the benefits of a world it was pivotal in creating.

Why does this matter? America is not 311,000,000/1. (The needs of the many overshadowing the needs of each one)³ The success or failure, the productivity and ingenuity, the rights and responsibilities of one individual, each individual, regardless of the total majority of souls, is what makes America strong. The rights of the one are guaranteed by the Constitution and our rule of law. The preservation of these rights bless America and make the American Dream possible. When the education system does not guarantee the rights of each learner to a comprehensive, interdisciplinary, fact-based educational foundation, the result marks the end of the American Dream.

The educational systems of the industrial age focus on compliance and factual recall. In its prime, the educational system provided producers, consumers, and for the advancement of science. It is a system that emphasizes the production of workers with left-brain knowledge. The SAT (Standardized Achievement Test) exams in use nationally measure this part of brain development. Now, due to technology and the global marketplace, we need right-brain development. We need creative artists, inventors, designers, storytellers, caregivers ... big picture

³ The practice that government represents and protects the rights of each individual, the 1/311,000,000 of our present population, is what makes America a haven for life, liberty and the pursuit of happiness. The protection of the rights of each citizen guarantees the rights of the majority.

thinkers;⁴ people who find ways around the constraints of systems that lock us into a particular mindset. We need people capable of bridging the technological and cultural aspects of our modern global economy with balanced left-and right-brain intelligence.

To make significant contributions, many of our most influential leaders in science and technology had to drop out of factory system schools that did not meet their needs. The educational system no longer needs to train students for a broad range of jobs better accomplished by computers. We are living in a digital world while our schools are still training factory fodder better suited to the passing age of industry.

Change doesn't come quickly or easily to those entrenched in educational systems and ways of life they have navigated comfortably for years. Within the past decade the foundations they have based their lives and careers upon - perhaps even how they define themselves as individuals - are being yanked out from under them. They are training students for a world they once knew. Though many don't know it, they are not preparing students to survive in the 21st Century. They proceed by circling the desks and petrifying remnants of the past. Some are scared and angry knowing there are forces out there that to them seem dangerous and anti-social. They will have to be re-educated or bypassed.

⁴ Pink, Daniel H. A Whole New Mind: Moving From the Information Age to the Conceptual Age. Riverhead Books. N.Y. 2005. A pivotal work. Professional educators need to read this book.

Think of a typical isolated classroom in the contained, controlled environment of a school building wherein students are locked away from the community due to the assumption that this is the best way to educate them. The building is hit by lightning. Suddenly everything explodes into myriads of fragments, each carrying coded bits of knowledge layered on top of and threaded through our traditional face-to-face experiences. Students are propelled into a virtual world that is not confined by political borders, intellectual territories, or structures like grade levels, seat time, bus schedules, disciplinary problems, teacher limitations, isolated disciplines, or class size. It is a place where the rules, structures, and petrification of the factory system no longer dominate. Where school buildings are not more important than children and learning is an empowering process. Where the sanctity and sharing of knowledge trumps the need to maintain a lecturer's authority. Where students are taught how to seek, evaluate and contribute information hand-in-hand with fellow students and master educators instead of just learning facts.

The reality is that most people, including the great majority of educators, would like to believe that the opening up and access to a vast limitless universe where no one controls information, where human interactions are significantly redefined, and where access to a new seemingly unlimited resource called *virtual space*⁵, can be ignored. They are barely aware that the universe of *virtual space* is already populated with thousands of *virtual worlds*, some larger than cities like San

⁵ Virtual Space is a resource which is populated by Virtual Worlds. It exists in data and imagination.

Francisco. They reject the fact that the future of every aspect of our culture - medicine, corporations, schools, parenting, home computers, the military, politics, and human relations - is becoming dependent on the use of this new resource.

***Virtual Space* is no longer confined to science fiction. It has now become an integral part of science fact.**

This book is not an introduction to Virtual Worlds⁶; rather it is about learning opportunities presented by the utilization of virtual environments - not as tools, but as resources - as a significant part of necessary educational reform. You can use a *search engine*⁷ and the sources noted in this book to learn more about virtual world applications. You will discover that in the USA there are hundreds of programs operating and under development at this time.

The use of virtual space as a resource to enhance learning is structured quite differently than the plethora of online education programs (digital or virtual schools) currently in place. In an increasing number of states, online education is used to by-

⁶ For up-to-date information about Virtual Space, Virtual Worlds and the Information Age, use a web browser like *Google*. Access information such as the work of Dr. Sara de Freitas, Professor of Virtual Environments; Director of Research, Serious Games and Virtual Worlds Research Group, Coventry University, England, whose body of work is a valuable introduction to Virtual Worlds. *Google*: Serious Virtual Worlds.

⁷ Search Engine (web browser). A selection-based search system using web robots (bots) and algorithms which allows the user to aggregate data and search the internet for more information about any keyword or phrase contained within a document, web page or software application.

pass interdisciplinary, comprehensive, fact-based education, and the Americanization of our children. In some cases, these online schools are a vehicle for corporations to access public education dollars for profit, not for students. After several years of operation, many online universities are now under public scrutiny. In states like New York, Florida, Ohio, Utah, Arizona, Texas, California, and Wisconsin, policies have been put in place that are part of a greed-driven agenda to access public education dollars for personal profit, regardless of the damage done to children and to our nation. Online education is becoming a big business.

There is a growing body of information that online education, as currently implemented, is not effective education in the comprehensive use of the word as identified in this book. Rather, it is an inadequate form of teaching that does not provide students with the tools they need to contribute to themselves and to society. Utilization of virtual world platforms to enrich learning experiences and the acquisition of knowledge is very different than access to PowerPoints and online versions of traditional classroom materials that characterize much of online education.

This book advocates the use of the internet as an educational resource for enhancing teacher effectiveness and education, not as a way of accessing tax dollars for personal or corporate profit. Online education, through virtual world resources and emergent technologies, should make the academic environment more stimulating, more collaborative, more immersive, and significantly more - not less - rigorous.

Our world has changed. It is no longer a question of “When?” It is happening now and our schools have fallen behind. Digital natives are populating our schools. Technology is seamlessly integrated into their daily world. Cell phones are standard gear, even in third world countries. Powerful links to information and resources are commonplace. In the face of these evolutionary changes, the structure of our schools is outmoded and rapidly becoming irrelevant.

Our nation is strong. We have the resources to keep abreast of change. We need leadership from educators who embrace the new technology. Change always includes an element of discomfort and controversy. Controversy is beneficial if it gets people thinking and discussing (or cussing) ideas that are not in the current mainstream. This book presents viewpoints that can be used in a nationwide dialogue about the future of our schools and our country.

Part I: What We Think We Do vs. What We Do

Ch. 1: Vital Lies

Like it or not, we have entered a new age through technological portals so complex they are beyond our individual ability to comprehend. It is not ‘maybe someday’ or ‘in the future’ that we must plan for, it is NOW as we enter a second decade of the *Information Age* and begin to comprehend the *Interactive Age*.⁸ We are already beyond the point of no return. The good old days won’t serve us. We must deal with change through facts and identify the lies we tell ourselves that block our evolution. If we don’t succeed, America will decay from within. A broken educational system *is* national suicide.

The author Voltaire, created a character for his political commentary that saw everything in the light of the ‘best of all possible worlds’. His character, Dr. Pangloss, wanted to believe that things as they are, are the best they can be.⁹ If you want to

⁸ The Interactive Age is the foundation for the Conceptual Age Daniel Pink introduced in, [A Whole New Mind](#). “We are moving from an economy and a society built on the logical, linear, computer like capabilities of the Information Age to an economy and society built on the inventive, empathetic, big-picture capabilities of what’s rising in its place, the Conceptual Age.”

⁹Dr. Pangloss is a character in Voltaire’s famous work [Candide](#). François- Marie Arouet, (pen name Voltaire), (1694 – 1778), was best known as a satirical polemicist. He frequently made use of his works to criticize intolerance, religious dogma and the institutions of his day. Candide is as applicable today as it was then.

believe that, then what is offered here will not be to your liking. Dealing with the truth or reality of our educational systems requires that we stop telling *Vital Lies*, identify the problems, and get involved in creating the new system that is replacing the one we have. The great American writer and philosopher Edith Hamilton, gave us insights into the way *Vital Lies* are used by a culture to perpetuate false ideas about who we are and what we do.¹⁰ Daniel Goldman, the internationally known psychologist, notes that *Vital Lies* are an important part of the mind to protect itself against anxiety by dimming awareness, resulting in zones of blocked attention and self-deception.¹¹ By identifying the *Vital Lies* we have come to believe about our educational systems we can analyze what we do to children in the name of education and get rid of structures and ideas that are no longer viable. To evolve our educational systems we must boldly eliminate what does not work while identifying, nurturing and enabling what does. Here are examples of ***Vital Lies*** we believe:

Local control of our schools produces the educated citizenry necessary for representative democracy to work.

¹⁰ Hamilton, Edith (1867 – 1963) was an American philosopher, educator and author recognized as one of the greatest Classicists. In her book, *The Greek Way*, she introduced the concept of Vital Lies using the funeral oration of Pericles as an example.

¹¹ Goldman, Daniel. *Vital Lies, Simple Truths*. Simon and Schuster. NY. 1986.

Property taxation is the best way to generate revenue for education.

The American Dream, which is the umbrella for our life, liberty, and happiness, can survive with a poorly educated populous.

We can bypass fact-based, interdisciplinary comprehensive education.

People lose social skills when they enter virtual space.

America is still a 20th Century industrial nation that requires a factory-based educational system.

Product manufacturing principles can be applied to education.

The election process screens candidates and results in elected balanced school boards focused on our children's needs.

Changing established bureaucracies and self-perpetuating systems is impossible.

Fact-adverse thinking will lead humanity forward.

Change will come from inside the system.

Schools are principally childcare facilities.

Online education is effective and can replace interactive, interdisciplinary, comprehensive, fact-based education.

For profit companies should have access to our education tax dollars.

In this decade we will determine if the American Dream, the umbrella for our individual quests for life, liberty and the pursuit of happiness, can survive. Many indicators point to a coming dark age for America and the American Dream if America does not renew its commitment to innovative education on a national level. Our educational systems are not creating the educated populous necessary for change and growth. Internal structures based upon false or outdated assumptions must be examined, changed, and/or eliminated.

Those who imagine some of the social, cultural, and technological challenges ahead, who are open to examining the good and the bad of the new realities, will have to lead at a time when sacrosanct parts of our operating system must be abandoned or radically redesigned. We must address issues like local control, states' rights, and the separation of education from manipulation by ideologues, religious factions, and cults that are damaging the America we pass on to our children.

The danger comes from those who take control in order to put their own biases into schools. It comes from entrenched

dogmatists - those holding to an authoritative principle, belief, or statement of ideas or opinion considered to be absolutely true - who will organize to resist any erosion of their power.

A minority of citizens will fight hard to preserve the status-quo. They will hold on to petrified systems whether they work or not because they are familiar, even if based on lies and misinformation. This is a serious problem. In our system of government a well-organized minority can have more power than the majority. These minorities can manipulate others to fight against their own best interests. *Fact-adverse*¹² leaders who successfully excite opposition to necessary change will destroy the American Dream.

Access to technology and fact-based thinking threaten the power base of those who once controlled information. In their desperation, will politicians arrest and silence people who access information, plan, and evolve systems in the *Information Age*? Will we block those who use technology necessary for the *Interactive Age*? “Oh,” you say, “that is being tried now in places like Syria and Iran.” This is tragic evidence that even killing people to keep change from happening doesn’t work. We can’t go back.

It is essential to our ‘American Spring’¹³ that we lay the groundwork on which our nation continues and is strengthened.

¹²For simplicity, “fact-adverse” means to oppose facts as an antagonist even when ignoring facts is contrary to one’s interests or welfare.

¹³ Recently, the use of the term “Arab Spring” appeared in news reports following the Tunisian and Egyptian uprisings attributed to the technology of the *Information Age* and the *Interactive Age*. We assume other

There will be conflicts with perceived states' rights,¹⁴ especially since that issue has been well-used by those fostering political alienation. Things we cannot fathom now will have to be dealt with. We might find that nationalism has a changed meaning as a world-wide network of people who work together across political boundaries develops. The global impact of 2011s occupy movements stand as a prime example.

As a benefit, this coming conflict will give us the opportunity to commit to the practice of providing every learner with a quality education, regardless of states' perceived rights, cults¹⁵, religions, political viewpoints, and minority cultures.

There is no issue more critical for our survival as a bastion of freedom - fostering life, liberty, and the pursuit of happiness - than the changes we must make to our educational systems.

We must lead innovative changes across all of our systems. Perhaps *We The People* will fail to change and another nation will pass us. Developing countries are already able to utilize the technological advancements of our nation without massive investments in research and development. They have access to our modern communications technology and are able to skip over

cultures will experience these changes. We fail to recognize the potential for an "American Spring" caused by the same forces.

¹⁴States' rights come from the colonial system in place when the United States of America was formed. There are still groups who want a modern America with colonial city-states or want their state to secede from the union.

¹⁵ Cult is used in this work to describe those united around obsessive devotion to, or veneration for, a person, principle, or thing.

the hard-won steps we had to take to develop things like hardwired communication systems - miles of telephone lines, switching stations, operators, desk phones. They went directly to cell phones for everything from banking to learning.

Think of the resources they were able to re-direct. We have millions of miles of copper wire, forests of telephone poles, and telephone sets in every house and business. Over the past decade virtually all of this infrastructure has become obsolete. We are reluctant to give up land lines and all the hardware; our history. Developing nations don't have to make those investments. They are not interested in preserving things in our past that do not serve them. They will progress beyond us if we don't move ahead with them.

We are left with one choice in almost all of our systems. Innovate, change, adapt and survive, or stay static and become increasingly irrelevant. Relevant education is the key. If our schools are focused on teaching how to make wire, when technology has moved forward into a wireless age, we need to change what is taught. When the structures put in place for childcare and conforming children for an age that has passed, create citizens who do not have the information necessary to contribute to themselves or society, we need to rethink what we are doing and change our schools. There is no clear-cut bullet point or PowerPoint path for implementation. There is, however, far more information and many more resources available to guide us than the average educator, parent, or leader is aware.

Ch. 2: We Can Do It!

We believe the *vital lie* that changing established bureaucracies and self-perpetuating systems is impossible. It may have been true in previous decades. It need not be true in the *Information Age*. There is no doubt the nature of our educational systems must change. Eventually, the groundswell of digital learners will force change and non-responsive schools *will* be redesigned. Schools as we know them, based on our own experiences and what we see and hear from our kids, are not effective enough. Learning as we presently know it must change its content, scope, time on subject, and teacher-student interchange. Instructional delivery systems must change. The model of a school as a physical place where information is gathered and presented by a teacher, textbook, and telling, is no longer viable. Test scores, as currently mandated, are not an effective measure of student, teacher, and school success.

Learning is not a one-way activity where students are filled with bits of information so they can pass tests in math and reading...tests that will determine if the teacher is fired and the school closed. No one would be that stupid, right?

According to the U.S Department of Education, education now costs about \$9,000 per year, per child.¹⁶ That figure is not accurate because the actual cost of education must include such things as the incarceration and welfare support of thousands who did not get the skills necessary to succeed in our complex society. In reality, education, perhaps the most important thing we do to keep America free, costs a lot of money. But it does not cost as much as a failed educational system. The estimated \$30,000 a year budget for keeping just one prisoner far exceeds the cost of a student in school. The cost of maintaining unskilled, unemployable people on welfare exceeds the cost of everything we do in education.¹⁷ How to serve those lost generations deprived of a comprehensive education and the mastery of essential skills is a real concern.

¹⁶ Based on estimates for 2011.

¹⁷ California spends an average of \$47,000 per year to incarcerate a prisoner. California Criminal Justice FAQ. California spends \$7,571 per year per-pupil.

The question is: Can established and powerful self-perpetuating systems be changed and modified? If the answer is no, then this Nation is entering a dark age. The American Dream, the umbrella for individual dreams, can only continue if it is based on an educated populous.

I don't recall ever reading that the ignorant shall inherit the Earth, but it may happen.¹⁸

Within blocks of each other, schools can be direct opposites. One school can produce successful, engaged and contributing citizens while another produces a quagmire of frustration and failure. Those looking for the essentials of education ask "Why?"

Most outstanding educators are not allowed to bring about necessary changes. There are structures in place that do not allow input from those considered *labor* in our management-dominated, coercive system that operates on industrial age values. The failure is the responsibility of the local school board, administration, department of education, and the lack of an educated public demanding effective education. It is the fault of people who take local control and use it to push their narrow agendas. It is the fault of those who do not require interdisciplinary comprehensive, fact-based education for each child. But let's keep the *vital lie* circulating that it's the kids, their

¹⁸ It is interesting to speculate that if a large, ignorant, non-participating population does not respond to the extremes in politics – on either side - they may level the playing field if they are coerced into voting.

parents, and the teachers - or better yet, because we need a scapegoat, let's blame the Teachers Association or the Teachers Union.

The need for change has always been in the conversations and plans of educators. Every few years a 'change movement' comes along and excites master teachers. When implemented, many of the changes make a big difference for the better. Effective changes are put in place, demonstrated, evaluated, and most everybody agrees they are necessary and great for kids. Then the changes are reversed. So what happens? Why don't our schools become flexible and responsive to the needs of learners? Why aren't our schools ready to make the jump into programs for 21st Century digitally-literate students? We need to know.

My first, painful experience with the destructive power of *the system* to overcome change occurred when I taught in what was then one of the nation's finest high schools. The school was student-centered, teacher-centered, parent-responsive, and students were involved in their community. The board adopted a policy that required every student to complete at least one quarter of unpaid volunteer work in the community. Programs that put high school students as aides in elementary classrooms and focused classes on the application of learned knowledge, flourished. Student achievement soared. The majority of the students were empowered, self-motivated, and achieving way beyond expectations. Special programs for kids with problems were implemented. Parents were happy. Students were happy. Teachers were treated as professionals. Awards were forthcoming.

A new principal was hired. He had little background in education, had a graduate degree in educational administration from an ivy-league school, but was unable to grasp the significance of what was happening for kids. Afraid, threatened, poorly educated by a system that taught top-down coercive management, he set out to kill any program or activity that was not traditional; that was out of his control.

I was one of many teachers who ran amazingly successful programs. The first thing he asked me was, "What's my legal responsibility in all this?" Later he announced, "I'm breaking up the interdisciplinary School-Within-A-School team. You will all be transferred to separate schools." Within months, the structures of control and inflexibility popped back in place and the energy within the school died. Years of significant advancement were wiped off the record. The self-preserving system of control and administrative facility was back in place.

Think of it as a dent in a sponge. As soon as eyes are on other things, the sponge pops back into its original shape. The system is back to the way it was before and a vital energy goes out of people. That self-perpetuating structure assumes the shape which is most efficient for managing large numbers of children, teachers, parents, and administrators. It works, if you measure success by cowed students, quiet classrooms, empty hallways, and orderly lunchrooms. Oh, I forgot to add, incomplete, misused test results.

Introduce a change that weakens administrative facility and the system will kick it out and resume as it was. Changes, although proven and necessary like the ones required now, don't

fit the operating system. If you are an educator, you have experienced this *mano muerta, the dead hand*.

Educators are running so hard to keep up in a failed, outdated system they seldom take the high ground and get a vantage point where they can see the whole American educational structure. If they get that advantage, they see elements of educational approaches that are working well and can be used as examples of what needs to be continued. They are also keenly aware of the elements that must be abandoned.

Professional educators dream of a time when necessary changes will take place and evolve the educational system. Many decide it is impossible to change a system designed for another age. Too many give up entirely. We can learn a lot about the educational system from effective educators driven out of education because a green light was never turned on.

Unlike any time in our history we now have the tools, information, and interactive networks necessary to create learner-centered programs. Educators are no longer isolated in classrooms. They have easy access to their colleagues across the nation and the world. They can share their insights and benefit from the observations and successes of others.

We have widespread access to information that is not controlled by any church, university, government, or school administration. Never before in the history of mankind has this been possible.

With the knowledge dam broken, a teacher who wants to change the teacher-student relationship, what is taught, and the student's access to knowledge, runs headlong into archaic structures in the way of change.

As a result, teachers are changing in spite of the system. Want to study and implement exemplary 4th grade curricula created by other teachers utilizing internet resources? *Google* it! Want to know if what some educational expert says is accurate? *Google* it! Want a definition or explanation? Use *Wikipedia*! Use any one of thousands of reference encyclopedias or books online, just a click away. Join a chat group with other science educators. Post on a science educator forum board and participate in a discussion thread. And yes, good teachers can use multiple sources to evaluate the accuracy of information contained on sites, and the validity of board-adopted curricula for their subject area. When they become more effective, they do not fit the old industrial age system.

The benefits of the Technological Age are changing the way citizens learn; the way we get information. When we want to know how schools are adapting to the *Information Age*? We *Google* it! If we want verification of essential skills that must be mastered by each child, we *Google* State Department of Education websites! When we want to know how education dollars are spent? We get access to public records online. If we want to know how many schools have been taken over by for-profit pirates? We go online. When we need examples of how students become self-directed learners in the *Information Age*, we send a bot on a search mission.

There is no end to the information out there. Today, unlike any other time in our history, anyone in the world with access to the internet has access to knowledge. What has to happen now is for the system to change and allow that knowledge to reshape it.

Seek out information to verify or reject points of view. You can easily do what only short years ago took hours or days to accomplish. Check out the information and make up your own mind based on facts, not disinformation, fear, or bitter memories. Enter into dialogue with others about concepts in this book.

The information ladder is there for every teacher and administrator - every educator, parent and student - and you don't have to start below your level of competence and work up. Nor do you need to spend hours of butt-based education¹⁹ in a classroom. Ready access to information accelerates learning and mastery, for teachers, parents and for all students.

The confluence of the web and a spirit of sharing intellectual property have fueled a global movement to make knowledge and education materials open to use by all.²⁰ MIT

¹⁹ Otherwise known as the Carnegie Unit. It is also called a Student Hour or Credit Hour. This is a time-based reference and a measure of learning based upon seat time in a class.

²⁰ In an article by John Markoff, *Virtual and Artificial But 58,000 Want Course*, published in the New York Times, August 16, 2011, Dr. Widom of Stanford University is quoted: "Having Stanford courses freely available could both assist and compete with other colleges and universities. A small college

published OpenCourseSoftware in 2002 which spurred the Open Educational Resources Movement (OER). OER are courses, books, lesson plans, articles, research and specialized data, tools, virtual laboratories, simulations, games, and software that support learning and educational practice are available and free.²¹

For most educators the availability of this information exceeds anything they know how to use. When they know it exists, they have no idea how to integrate this knowledge base into their test-limited curricula and antiquated educational delivery system.²² They need training.

When they seek help, their colleges and universities haven't a clue as to what to provide. Teacher education programs must be completely revamped and modernized to meet the needs of teachers in the *Interactive Age*. Teacher education programs are notoriously weak and entrenched in the factory system. The teachers needed today are highly skilled, professional educators who serve as mentors and guides to their students. They must be able to use the new technology. They must set the parameters for each student in their discipline and help direct each student to resources in and out of virtual space. They must be interdisciplinary and connect their discipline to the student's total

might not have the faculty members to offer a particular course, but could supplement its offerings with Stanford lectures.”

²¹Adapted from Science, January 2, 2009. *Opening Education*. Marshall S. Smith.

²²Curricula is now being designed by testing services to fit the tests they sell. What is taught as a result may not serve any but those who design the questions. This is more about business and profits than student learning.

comprehensive education. They must collaborate with other master teachers and experts in their fields from around the globe. Most importantly, they must help each student become a self-directed learner, able to learn, adapt, and contribute in the future.

If the universities train student teachers to use updated and effective new methods of instruction, they are hampered by the reality that student teachers placed in outdated instructional environments must comply with the policies and practices of the school they are placed in. If they generate a bunch of ‘Young Turks’, whose teaching methods tend to threaten the teachers they are placed with, the student teachers will be failed. Supervising teachers don’t want student teachers who question them or make them look bad. They are the teachers, not the students. This is a serious obstacle to teacher development and change within the system.

In the past, schools blocked powerful teaching resources that would have prepared teachers for the interactive learners they are facing now. As an example, anyone working with teenagers who has used Alvin Freed’s work, T.A. For Teens,²³ knows they have found one of the essential keys to communicating with teenagers. Understandably, the introduction of Transactional Analysis to teachers was blocked by the system in place; a system not designed for two-way communication. A student teacher trained in TA and interactive, two-way communication would have to stay silent or be failed. Like so

²³Freed, Alvin M. PhD. T.A. For Teens and Other Important People. Jalmar Press. CA. 1976. 5th Printing.

many other necessary developments in education, effective TA programs threatened the system. Factory workers do only what they are told. They do not debate with or communicate with the boss.

Too many schools are seeing online (virtual) education as a solution to failing schools rather than a resource that can be used by educators to enhance learning.

Virtual space is a resource for educators, not a way to bypass our public schools.

Some schools think they are meeting the needs of students when they put courses online, but the majority of these courses are not utilizing the powerful resources of virtual world environments. They simply take the same two-dimensional, non-interactive, rote learning experiences of questionable value found in the classroom and put it up online. Oh yes, you recall lousy teachers who did that to you. “Read the chapter and answer the questions at the end. Then we’ll have a test. I’ll be in my office if you have any questions.” That was not education then, and it certainly is not useful now!

The 2010 film, *Waiting for Superman*, points out that parents want better schools *now*, for their children in school *now*. Although the film is biased and misleading in many ways, its

message that Americans want a way to get their children in good schools is right on.²⁴

There are young people whom we call 'Digital Natives'²⁵ or 'Millennials' who can help us evolve our schools for the 21st Century. They are not like Superman, but they have developed their skills in virtual places and know what is possible. This small group of Super People, young men and women - many under the age of 30 - have a difficult time communicating with those of us functioning on outdated information and assumptions.²⁶ They use a different set of tools. We 'Old Farts' are learning to use some of the communication methods used in the *Interactive Age* they are pioneering: Twitter, Facebook, Digg, Reddit, Ted, YouTube, Flickr, StumbleUpon, MySpace, LinkedIn, and of course the vast information available through *Google* and *wiki* sites.

Most of us wouldn't dare follow them into the virtual World of Warcraft,²⁷ or Everquest,²⁸ which are discounted by

²⁴ *Waiting for "Superman"* is a 2010 documentary film from director Davis Guggenheim and producer Lesley Chilcott. The film analyzes the failures of American public education by following several students hoping to be selected by lottery for acceptance into charter schools which they assume are better. The film is biased against teachers, unions, and district schools. It did not acknowledge that most charter schools are severely failing kids.

²⁵ Prensky, Marc. Digital Natives, Digital Immigrants. From *On the Horizon* MCB University Press, Vol. 9 No. 5. October 2001.

²⁶ IBID. Small and Vorgan. Recent studies have shown that their brain development is different due to the evolution of their minds caused by technology. There is a definite Brain Gap between Digital Natives, Digital Immigrants, and the digitally illiterate.

²⁷ World of Warcraft, often referred to as WoW, is a massively multiplayer online role playing game (MMORPG) set in the Warcraft universe. It

some educators as ‘only games’, even though they contain code that is changing everything.²⁹ What is nearly impossible for us to comprehend is a revised and different educational system operating on concepts (code)³⁰ found in these games. We have to see beyond the fanciful avatars and look at the interactive educational opportunities provided by the game’s operating code.

We struggle to identify and, so far, fail to grasp the new direction we are going. Most of our educators are not prepared to learn from this small cadre of digitally competent travelers in virtual worlds. As my sons and their peers, who are members of this new leadership generation can attest, their information and educational goals are so new and alien - in some instances so threatening - that few academic institutions grasp their significance, nor their economic value. To understand the power of these new developments, it is important to spend a bit of time touring these virtual worlds. Ask a millennial to show you the way.

Educational institutions are beginning to realize they must transform their programs to interface with the learning styles,

is developed by Blizzard Entertainment. As of 2010, *World of Warcraft* has more than 12 million monthly subscribers and currently holds the Guinness World Record for the world's largest and most popular MMORPG.

²⁸ *EverQuest*, often shortened to *EQ*, is a 3D fantasy-themed massively multiplayer online role-playing game (MMORPG) developed by Sony. It was released on the 16th of March, 1999.

²⁹ Gee, James Paul. What Video Games Have To Teach Us About Learning and Literacy. Palgrave Macmillan. NY. 2007. Schools can profit by understanding why games are so absorbing as players learn how to navigate terrain and solve complex problems.

³⁰ Code in games is sometimes referred to as *codex*. Either use means a system of symbols and rules used to represent instructions to a computer.

technological skill sets, immersive environments, and social networks of these *Information* and *Interactive Age* students. That requires a change in the way we educate. The culture of 21st Century digital learners is breaking down the control structures of the factory-based system. Via technology, students, teachers, and parents, have easy access to information from many sources, not just a school, a teacher or a curriculum. As long established institutional systems fail to evolve, digital learners will continue to seek out other options for their education.

The following is an insight into understanding how different the new games technology can be:

The complexity and open-ended nature of MMOGs (massive multi-player on-line games), make their player base unique. Instead of a sequence of short interactions as seen in most multi-player games, individuals engaging in MMOG play may interact in the same community on a regular basis for years at a time while developing a reputation, friendships, and even romantic relationships. It is a direct result of the depth and capabilities of these games, and the internet, when combined with extended social behavior on a daily basis, which has created what is in many ways a parallel life that exists and affects an individual's real life. To this end, these games are not simple distractions, but rather exist in a social environment as real as Friday night poker with the boys, a first date at a movie theater, a

*leadership position in a local organization, or a promotion at work.*³¹

In an effort to utilize the world of virtual space, hundreds of universities created a presence in the virtual world of Second Life. Linden Labs,³² sold plots of virtual space populated by storefronts, gathering places, and campuses. Even though Second Life is based on technology and approaches which are already out of date, it exemplifies a significant first step toward the use of virtual space for integrated interactive learning. Other pioneering programs incorporating gaming platforms will bring us closer to the educational applications educators need.

Change is possible! Institutions and educators need to fully embrace the new technology. It is unavoidable. Digital natives and millennials will not accept the old models for schooling. The resources they are using in virtual space are helping to define the resources teachers need to be more effective.

³¹ Berger, E. Alexander. *Not Just A Game – How Online Gaming Communities Are Shaping Social Capital*. Thesis. Barrett Honors College, Arizona State University. 2007.

³² Second Life is an online virtual world developed by Linden Lab. It was launched in 2003. A number of free client programs, or viewers, enable Second Life users, called residents, to interact with each other through avatars. Residents can explore the world (known as the grid), meet other residents, socialize, participate in individual and group activities, and create and trade virtual property and services with one another. Second Life is intended for people aged 16 and over, and as of 2011 has about one million active users. Wikipedia.

Ch. 3: Things *Will* Change

As we utilize resources that can be made available in virtual space, things as we know them will change. Designing new education-specific approaches will require imagination and leadership. Here is a description of some major changes we face: Do you agree? Disagree? What should we add?

- ❖ The World is smaller and more connected. Today, courtesy of *Google Translate*, we can easily contact and have a written conversation with someone who speaks and writes another language. Computer-generated translator programs connect people right now through accepted technology already in place and in use. A child in the US can share ideas and experiences with a child in China or India. Within this decade we will be able to converse verbally with non-English speakers. We saw hand held translators on *Star Trek*. That was fiction. Now, translator programs and hand held devices are a reality. The introduction of *Siri* in iPhones by Apple is already changing the way technology can help us. “Just speak naturally. Siri understands what you say.” We can come together and communicate in real and synthetic environments.

Teams of learners and producers from all over the planet can work together to learn and to solve problems.

- ❖ The resources available through technology are the vehicle through which change can be accomplished. Through technology, more people have the opportunity to work globally from a home office in virtual space. A majority of secondary school students are using resources in virtual space. Toddlers are learning through games and becoming computer literate. In the decades to come, student use of technology as an everyday tool will be as indistinguishable as our use of other common technologies like pen and paper.

- ❖ We must prepare every learner in our educational systems for self-directed learning in virtual spaces open 24/7/365. The concept of a classroom with seats and a chalkboard is changing. 21st Century students demand education that is *interactive and up-to-date*; education for a new socio-economic order.

- ❖ A clear distinction must be made between foundation/training (drills on multiplication tables) and education (thinking, evaluating, internalizing, and applying concepts). Redundant tasks, drills, re-teaching, some evaluation, and other student services can be handled

effectively in virtual environments, freeing teachers to focus on each student – to mentor and educate.

- ❖ Regardless of the changes in families and the integration of technology, each state must guarantee a K-12 curriculum that provides the essentials of foundation/training required to provide quality comprehensive interdisciplinary education for every child, regardless of the school they attend or their family makeup.
- ❖ Academic achievement must be measured by the learner's ability to apply learned data, not the almost meaningless test scores we use now.
- ❖ Teachers can no longer be childcare providers first *and* educators second.
- ❖ In the current system, the main purveyor of information is the teacher. Instruction flows from the teacher's knowledge base while students listen, follow directions, and obey. Communication is primarily one-way and from teacher to student. This format is not effective. Teachers, primarily in the upper grades, can no longer control access to information. The web offers students access to vast amounts of information. The 'sage on the stage' model doesn't work well with 21st Century students. The teacher can no longer be

the sole teller of knowledge. Master teachers use multiple-resources and their students are empowered and engaged. They are ready to add the seemingly unlimited resources of virtual space to their teaching techniques. They understand that empowered, digitally literate learners can provide added, valid research and information.

- ❖ The master teachers needed now are also motivators and storytellers. This is not a new concept, as Garrison Keillor, Steve Jobs, and Bill Clinton have demonstrated. Excellent educators/communicators have always used this technique. The lecture, often used to tell information, now becomes a way to help students 'see' the whole picture. It can link learning to the real world and life. Storytelling is an effective tool. Telling information is not.

- ❖ Through the use of virtual resources, we don't have to physically move bodies from place to place to conduct education and business. The necessary resources can be available in readily accessible virtual space, including avatars as extensions of the teacher, and facilities that provide group and individual work space. For the first time, teachers can create and utilize a teaching war chest of approaches that contains resources that are relatively inexpensive and can be custom fit to the challenges students present.

- ❖ Learning is no longer place-based in a school building. To prepare learners, apprenticeships and onsite training (application-phase programs) must be a part of interactive education, as well as programs that require critical thinking and self-directed learning.³³

- ❖ We must have educational programs that prepare learners to deal with unlimited and uncensored, information. Students must be trained to verify and evaluate sources of information. Because learners now have access to unlimited data, they must learn how to use these resources in a positive way and not get trapped in closed-loop games, networking, or addictive viewing.

- ❖ Every child must be able to read and develop an understanding of the importance of reading complete works vs. partial bits of information available via the internet.³⁴ In a *Google* search, we find parts of a book –

³³ Burns, Melinda. *Socrates' New Students. Debating the best way to teach kids critical thinking.* Miller-McCune. January-February 2012. P. 13. Ref: Kuhn, Deanna. Columbia University professor of psychology and education. "The country needs citizens who can make logical arguments based on substantive claims, sound reasoning, and relevant arguments."

³⁴ There is ample information that reading for pleasure and reading for information and understanding is declining among young people. Knowing this, we must design educational programs that require reading. The bits bots gather are not complete sources of information and probably result in users who have short attention spans and incomplete understanding.

the incomplete bits and bytes bots search out and bring to the screen. That information helps a learner decide if the book contains the right information, but the learner will have to download and read the book to understand the information the book offers. A summary of the plot in Shakespeare's Romeo and Juliet does not capture the artistry of the work. As the new ages progress, we must be wise enough to ensure that the essentials – such as reading with acuity - necessary for critical thinking and functioning - are not passed over.

We are seeing the introduction of electronic books that include, when an introduced idea or photograph is clicked on or even blown on, an in-depth presentation with color and sound explaining the concept. Photography, interactive graphics, animation, documentary footage, multi-touch interface, photos, audio video, and graphs, are available as downloads. In October 2011, this new type of text was introduced by Push Pop Press. This first of its kind interactive book, Our Choice, by Al Gore, is available on tablets and other readers. If one has any doubts about necessary changes in our use of new technology in our educational system, pull-up a copy of, Our Choice.

- ❖ The current philosophy of training factory-ready workers is no longer viable. Manufacturing is being

transformed by technology and the workplace is becoming digital and global. Students need to be trained for the future, not the past.

- ❖ With the major changes in our 'workforce' needs, the family and how it functions must be redefined for the *Information Age* and the *Interactive Age*, not the *Industrial Age*. That is already happening as the role of men and women in society is redefined and 'institutions' such as marriage are no longer the same as they were years ago. Today, most workers serve in retail establishments, not factories. It is interesting to note that at this time, even retail work is being redefined by internet sales that are not place-based in local retail establishments. Our 'workforce needs' may allow an increasing number of workers to work from home; stay at home with their families.

- ❖ With the move into virtual space, secondary school students will not be held together in classrooms and school buildings. A new system of control must be developed which includes parental responsibility and involvement. We must guide parents so they understand their role and their responsibility for support and supervision. Childcare (warehousing) must be re-designed to support sports and physical

activities, application-phase play, life-long recreation, and the arts.³⁵

- ❖ We are challenged with designing a whole new plan for what education is and how it is accomplished. The one thing that must be in place is the federal government's role in making certain every child receives the same foundation/training of interdisciplinary comprehensive education and Americanization.³⁶ When this is in place, all public schools will provide comprehensive interdisciplinary, fact-based curricula. Many alternative experiments such as partial schools – i.e., charter schools – will not be acceptable.

I was deeply involved in the charter school movement. I bought into the idea based on a promise of accountability. I have seen it tried, seen the concepts behind charter schools sabotaged and perverted, and learned that the experiment is not only educationally invalid, but extremely destructive. The future of our

³⁵ Small, Gary M.D. and Vorgan, Gigi. IBRAIN: Surviving the Technological Alteration of the Modern Mind. Harper Collins. 2008. Discusses research into how the brain is evolving and the problems individuals who are immersed in computer generated programs and activities develop if they are not involved in physical activities and interactive relationships off line.

³⁶ Author's note: I intentionally reverse the terms Interdisciplinary Comprehensive and Comprehensive Interdisciplinary to emphasize their importance.

children should not be used to lubricate the wedge of educational change and the privatization of education.

- ❖ The use of virtual space as a resource, not a total replacement for bricks-and-mortar, will free taxpayers of much of the burden of capital construction and maintenance. The dollars saved will help pay for the costs of technology and professional teachers. It is important to note that cost savings alone cannot drive the creation or elimination of educational programs.

- ❖ There is a difference between the use of virtual space as a resource to support quality teaching, and what is currently being marketed as virtual schools which are not schools at all. Virtual schools and on-line stand-alone educational programs are not whole schools. They do not provide interdisciplinary, comprehensive, fact-based educational programs. Private and corporate greed drive their creation. These corporations seek access to the billions of taxpayer dollars allocated for comprehensive public education.

- ❖ Ending this initial list of things that must change, is staffing. Differentiated staffing models – for example, those who provide childcare, and those focused on teaching and mentoring, can ensure that remuneration is based on specific training, work, and competency, and not longevity or position on the salary scale. In the

future, our most competent educators must teach and mentor, not load busses, patrol hallways, or do administrative work. Job descriptions and pay scales for those who serve in support capacities for students and master teachers, will separate childcare services from academic services. Fair pay for professional educators (master teachers) will attract the best and brightest to the teaching profession.

Ch. 4: America's Educational Framework

America's educational system was planned. Horace Mann (1796 – 1859) was one of the greatest educational reformers of the 19th Century. He had a vision for one overall educational system to 'conform' youth. Mann argued that universal public education was the best way to turn the nation's unruly children into disciplined, judicious republican citizens. Mann won widespread approval from modernizers for building public schools. Most states adopted one version or another of the system he established in Massachusetts, especially the program for "normal schools" to train teachers. Mann has been credited by many educational historians as the "Father of the Common School Movement".

In the decades that followed, early 20th Century educators – many like Kilpatrick at Columbia University³⁷ – stayed focused on uniting America via the 'educational system'. They had to ensure that a child in Oregon got the same training, education and social skills as a child in Florida, Pennsylvania, Texas or California. They made certain that America had one language, one set of

³⁷Kilpatrick, William Heard. (1871-1965). American philosopher. He taught at Teachers College, Columbia, from 1909, becoming professor of the philosophy of education in 1918.

cultural norms,³⁸ and one system of overall federal and state leadership. They recognized the need for our national constitution which can overpower individual state constitutions, if necessary, to guarantee each citizen's rights. They believed that quality schooling resulted in an educated citizenry with the ability to evaluate representatives and participate in the voting process. These visionaries shaped American education's role through a process now known as *Americanization*. It united a vast country containing hundreds of divergent groups.

Americanization is a nationwide organized effort to bring millions of immigrants into the American cultural system. It is the process by which an immigrant to the United States of America becomes a person who shares American values, beliefs and customs. This assimilation process typically involves learning English and adjusting to American culture and customs, while keeping their native foods and religion. Americanization standardizes cultural and educational values in order to ensure that every student, regardless of language base, cultural differences, or different governmental standards, has an equal opportunity to make a contribution to self and country.

Thirty+ states passed laws requiring Americanization programs. In hundreds of cities the chamber of commerce

³⁸Lining up, raising one's hand, permission to go to the bathroom, get a drink of water, or sharpen a pencil, not talking out of turn, cleanliness, proper dress, acceptable words, proper respect for authority, sitting still, responding to bells, keeping writing tools, respecting books, not running in the halls, not throwing food, disposing of trash, getting along with others, how to conduct one's self when attending a performance or concert... the complete list of acculturation requirements as 'taught' in schools is too long to include here.

organized English language and American civics classes. Many factories cooperated. Over 3,000 school boards, especially in the Northeast and Midwest, operated after-school and Saturday classes.

To implement the concept of 'One America', structures and processes to educate all Americans were established. Guidelines were required. There was strong opposition from cultural and religious groups but great leaders understood that if a child could not speak the common language and did not have certain values and cultural similarities, they would be left behind. The country would not have a workforce that could provide the products of a growing industrial giant. It could not compete internationally.

In the model adopted by every state department of education across the nation, elementary school children were thrown into a cookie-cutter system which conformed them. Each child, regardless of individual needs, was expected to leave school inculcated with certain measurable skills and values. Over time, the structures and processes put in place to standardize children became so entrenched and self-justifying that few other reasons for schooling were welcome.

We call what emerged, the *factory system*. The system trained children for jobs in factories and developed a school schedule designed to meet the needs of factory workers. It was less focused on the quality of education (how children learn) than taking care of children while their parents worked, and conditioning them to obey their bosses.

To make the factory system work, the family was re-defined and schools assumed a larger role in areas outside of education, such as childcare. One or both parents worked outside of the home or family farm. Children were turned over to the state so they could be taken care of during the working day. Thus, schools became first-and-foremost places to keep children safe. Childcare was given more emphasis than education.

In the early 1900s, there were prominent national leaders³⁹ who tried to introduce other educational approaches that were more focused on the individual needs of the child vs. work force development. They were very interested in the work of Maria Montessori, a well-respected educator from Italy. Montessori believed instruction should follow the child. A teacher's role was to observe the child and facilitate. Delivery methods included sequential learning modules, varied approaches for different learning styles, self-directed learning, and demonstrated mastery.

Kilpatrick and others leading the system were strongly opposed to these 'progressive' views. They claimed, for example, that Montessori's⁴⁰ work was outdated. History has shown that Montessori's thinking was far ahead of her peers.

³⁹Samuel McClure of McClure's Magazine, Mr. and Mrs. Alexander Graham Bell, Mr. and Mrs. Thomas Edison, Helen Keller, President and Mrs. Woodrow Wilson, Publisher William Morrow, Harvard professors of education, and throngs of enthusiasts wanted to see the Montessori vision of education thrive.

⁴⁰Montessori, Maria (1870 – 1952) was an Italian physician and educator considered by many to be one of the greatest women of the 20th

Montessori's approaches, however, did not win out over the structures and processes necessary for ***cultural conformity*** and ***workplace readiness*** emphasized by the educational leaders of that time. America's education standards are based on the same structures that were set at the turn of the twentieth century, a time when the first telephones, electric lights, automobiles, and airplanes were curious innovations. It is interesting to note that Montessori's ideas are applicable now, a century later, as we redesign the American education system to fit our times.

When states implemented overall standards for cultural conformity and workplace readiness through federal and state guidelines, they set a precedent that is useful today as we search for ways to overhaul the massive antiquated infrastructure of our public education system. The adoption of federal and state guidelines which require that every child receive a fact-based, comprehensive, interdisciplinary education, with some competence in at least ten disciplines, including civics and government, would ensure that America can become 'workplace' ready with competent citizens who continue to lead our vital nation in the 21st Century.

Our society has evolved. The factory system developed by educators in the 19th and 20th Centuries no longer fits the needs of 21st Century learners. Warehouses/schools designed to store

Century. Her ideas, which focus on the child, threaten the concept that the main function of education is an Americanization process. When Maria Montessori came to America in 1913, she was warmly received as a genius in the education of young children, but her ideas did not fit the cookie-cutter model.

kids and keep them under control can no longer limit the education program. With the increased integration of technology, there is the opportunity to separate child care from education.

The requirements for content in the ten disciplines have not altered greatly, but the delivery methods now available are radically different. Through the utilization of virtual space, an opportunity exists to shed the shackles of the factory system and forge a new system that fulfills our national imperative and meets the needs of the individual child.

Ch. 5: We Must Remain One Nation

The majority of Americans believe in a country where a student can go to any public school, in Alaska, Arizona, Florida, New York, Texas, or Idaho, and receive a good interdisciplinary⁴¹ comprehensive education based on facts, content, and sound educational practices. Americans do not believe in education which is cult or religious-based indoctrination. Nor do Americans want schools driven by profiteers trying to capture the minds of children for personal gain.

Universal education is not a new idea. The early founders of the educational system believed in the goal of 'One Nation'. It continues to be a cultural imperative that makes sure children – from wherever they come – speak the common language, have similar cultural values, and are exposed to the same standardized comprehensive curriculum. English is American English wherever you go. Arithmetic precedes higher mathematics. Foundation/training precedes 'education.'⁴² The forces that united America

⁴¹ "Interdisciplinary", as used herein refers to the interaction between disciplines AND multi-discipline curricula made up of at least ten disciplines which train learners to think in an interdisciplinary manner.

⁴² A distinction must be made between foundation/training (drilling multiplication tables) and education (thinking, evaluating, internalizing, and applying concepts).

were not an accident. Amazing leaders saw what was needed and they crafted a system that unified the various parts of the country to create Americans.⁴³ That system also responded to the need for a broadly educated populous and the valid idea that each student must be exposed to many disciplines, ideas, and ways of thinking.

It is the responsibility of parents and educators to make certain children receive an education that exposes them to a range of disciplines - from arithmetic to zoology - while they are in their formative years. This exposure opens interdisciplinary windows and lays the foundation for the working-contributors necessary for our nation's future.⁴⁴

⁴³ Reformers wanted all children to gain the benefits of education. Prominent among them were Horace Mann in Massachusetts and Henry Barnard in Connecticut. Mann started the *Common School Journal* which brought educational issues to the public. The common-school reformers argued their case on the belief that common schooling could create good citizens, unite society, and prevent crime and poverty. As a result of their efforts, free public education at the elementary level was available for all American children by the end of the 19th Century. Massachusetts passed the first compulsory school attendance laws in 1852, followed by New York in 1853. By 1918 all states had passed laws requiring children to attend at least elementary school.

⁴⁴ Nunez, Elsa. *Liberate liberal arts from the myth of irrelevance: Today's Employers Want Workers Who Are Thinkers*. Christian Science Monitor. July 25, 2011. "In the most recent employer surveys (2007, 2008, and 2010), the Association of American Colleges and Universities (AAC&U) found that the vast majority of employers say they are less interested in specialized job proficiencies. Instead, they favor analytical thinking, teamwork, and communication skills – the broad intellectual and social competencies available through liberal arts education."

In addition to the ten major disciplines,⁴⁵ schools can provide additional programs for students who show special aptitudes. Even if a child has great potential in math for example, he or she is cheated when a K-12 school *postholes* (goes into depth in one subject area at the expense of others) and does not provide each child with an interdisciplinary comprehensive education. Denying children exposure to a variety of disciplines limits their range of understanding and results in specialists with little interdisciplinary understanding or the ability to adapt to an evolving world.

A well-educated person knows how to apply many approaches to understand and solve problems. A solid comprehensive curriculum focuses on different thinking exercises. We are taught to know the difference between the scientific method and personal opinions. Ideally, no state or group can deny American students the right to this information.

Sadly, the major force that created ‘One Nation’ is under attack and being dismantled by narrow-thinking cultural and political groups. In many parts of the country these attacks come from pressure groups who are attempting to emphasize one

⁴⁵K-12 Comprehensive curricula includes: Language arts (English, reading, grammar, literature, etc.), arithmetic/general math (algebra, geometry, calculus, physics, etc.), science (biology, general science, earth science, chemistry) social studies (geography, world history, American history, civics and government), art, performing arts, music (choir, marching band, etc.), health, physical education (sports, etc.), foreign languages, and computer/ technology.

culture or language over others. In places, groups and cults⁴⁶ organize to remove their children from public schools so they can inculcate their own, often fact-adverse views. Local pressure groups want their version of American history in the curriculum, or ideas about evolution, climate change, religious viewpoints, women's rights, or sex education added or deleted. Getting to children's minds by denying them access to information deemed dangerous has become common, to the detriment of the American Dream. Even variations of American English are being considered.⁴⁷

About a century ago conflict between parents and states arose when a nationwide system of uniform comprehensive curriculum was required even though the parents and their community spoke another language, were trying to preserve another culture, or had other ideologies. Today that conflict continues. Minority political and religious organizations in control of states may wish to direct tax dollars to religious education, cults, and other groups who want education confined to their beliefs.⁴⁸ Some parents want their children educated in their

⁴⁶ IBID. Cult is used in this work to describe those united around obsessive devotion to, or veneration for, a person, principle, or thing.

⁴⁷ Those who would make Ghetto Rap a recognized language, or modify spelling to include the new 'shorthand' developed by the limitations of texting and on-line communication – LOL, :).

⁴⁸ States deprived some of their citizens of their civil rights. The federal government had to override those states to protect the rights of every citizen. Not all states are controlled by those who want children to have a fact-based educational foundation, therefore federal guarantees of children's rights to an interdisciplinary comprehensive education, regardless of the state they live in, are required.

native language, while others want courses they disagree with deleted.

At some level decisions must be made that counter the well-organized minorities and pressure groups that have been successful in selectively editing the way Americans are educated. 'One Nation' depends on strong guidelines that overwrite state and special interest groups ability to use state and local control as a way to access funds and power for their cults, religions, and extreme political ideologies. (See: Chapter 9)

Some groups are encouraging parents to remove their children from the influences and problems of public schools. A small minority want to limit and control public school curriculum. The average public school parent, however, is not part of a well-organized minority with a targeted agenda. They are primarily interested in quality, comprehensive, interdisciplinary education. They are concerned that the schools are not providing the breadth and depth of education necessary for their children to succeed in the future. They want to be involved. They make a valid claim that parents should not give up the responsibility for the education of their children.

Active involved parents are necessary for the success of their child in the public school system. Sadly, the system has limited parent involvement for over a century. It has created parental push-outs and failed to provide guidelines for the parental support a child needs. After decades of keeping parents out of the educational process, it is a sad irony that the schools

are finding themselves in a position where inordinate amounts of time and energy are spent parenting children. This is eroding the ability of educators to teach.

When educators attempt to involve parents in the school and the education of their child, old structures keep that from happening. For example, in a charter school I helped create, when parents were required to sign a contract with the school about enforcing attendance, helping with homework, attending parent-teacher conferences and like matters, the State Department of Education absolutely forbid the contract. The only reasons given were political and had nothing to do with education or children's needs.

Educators and parents need to forge a new relationship that places the responsibility for parenting back in the home. Parents need specific information about how they can support their child in the school.

Ch. 6: Americanization (Socialization) Do We Need It?

I'm not sure an early 20th Century teacher with a classroom full of impoverished children from emigrant families who did not speak the English language, had a harder time of Americanization than a teacher working in one of our ghetto schools.⁴⁹ One thing is certain. The dream of 'One America' cannot grow if segments of the society do not fit in; if they are not educated toward common goals and ideals; if they can not engage and participate; if they are not included.

Americanization has become synonymous with socialization.

Americanization has helped children adapt and prepared them for instruction in foundations/education. Today, we must add that Americanization requires that each child's needs are addressed so the child is freed to learn. Hungry, scared, deprived children, whatever the causes, cannot focus on learning. It is clear

⁴⁹ Ghetto: Today the term refers to an overcrowded urban area often associated with specific ethnic or racial populations living below the poverty line. From a statistical perspective, ghettos are typically high crime areas. Educational systems in these zones are sub-standard. Children are deprived of their rights to a quality education. Due to a lack of education, citizens in these areas do not have the tools necessary to contribute to our complex society.

that little mastery of foundation skills or educational development can take place until child safety and security issues are addressed. This may seem to be common sense.

A major failure of Americanization is that we do not have mandatory programs that meet the needs of children who can't survive in a traditional school. Instead, we alienate and exclude children who do not fit. These push-outs or drop-outs severely damage our communities and our country.

I haven't been able to find a *vital lie* that justifies abandoning these children. Maybe the lie is, "We can't afford it." The truth is we can't afford not to do it. A vile lie I've often heard is, "We have proven these kids can't learn." The reality is that today over forty million lost souls are dropouts who find it almost impossible to make a contribution to themselves or their county.

It is the responsibility of the school and the parents to get children socialized and education-ready. We cannot allow them to drop out and run wild in the streets.

Our core cities and increasingly, our rural areas are filled with mis-directed, poorly educated, dropout youth who are a drain on society. The solution seems obvious. If a child does not have the skills to function well in the traditional school setting, or if his family is dysfunctional and cannot/will not support him in school, then what is needed to save these children, and our society, are foundation training and acculturation (Americanization) programs.

These ‘alternative schools’ can be modeled after the programs once provided by military basic training, the Civilian Conservation Corps, and the Works Progress Administration.⁵⁰ These are programs designed to place these children in a new environment, address the problems that limit their individual growth and development, and help them obtain the skills, self confidence and resolve necessary to contribute to themselves and to society.

Every foundations/education program has elements of Americanization and every Americanization program has foundations/education elements. We must clearly identify how they interweave.⁵¹ There has long been conflict in our schools between the time spent on Americanization and time spent on training/education. Should our finest teachers teach or patrol lunchrooms? As we progress into the 21st Century and into the *Information Age*, we have the opportunity to utilize technology to maximize education.

Aspects of schooling relating to childcare and Americanization are primarily place-based. Learning and applying core concepts of the ten basic disciplines are better adapted to virtual environments. As we integrate technology into our educational system, more and more foundations/education

⁵⁰ Programs developed in the 1930s to help young people who lacked the skills and habits necessary to be productive citizens. At the onset of WWII, basic training was enhanced to address the problems of young men who were unwashed, uneducated, unskilled, and dysfunctional.

⁵¹ Much of education is training which establishes the foundations in each discipline. Elementary schools do mostly foundation work – training.

programs will utilize resources in virtual space. Utilizing these resources it is possible to identify, track, and individualize learning that meets the needs of each child. That was almost impossible to do until now. Virtual worlds can be created which allow educators to increase their effectiveness using any number of virtual resources - Avatars being a prime example.⁵² The use of virtual instructors for training and redundant tasks/drills gives the teacher time to work with each child, and multiple ways of instruction that can be tailored to each child's needs, as well as very specific analytics systems that show them exactly what each child needs.

As students spend more time engaged in virtual learning environments, questions arise. For example, there is an increasing body of information that the use of technology results in brain changes. Many, if not most of these changes, seem to have positive impacts. Small and Vorgan noted that some problem solving involved the frontal lobes, regions that control learning, memory, emotions and even impulse control.⁵³ Many video games and computer-based learning programs stimulate and grow these areas of the brain.

Research has also shown that students who shut themselves away from society by withdrawing into deeply immersive internet games and activities are not developing the

⁵² A type of virtual clone used to increase a teacher's effectiveness. A virtual manifestation created to do certain things, for example, coach and drill students or take attendance. Avatars can look like the teacher. They do not need to be weird creations like we find in the gaming community.

⁵³ Small and Vorgan. IBRAIN: Surviving the Technological Alteration of the Modern Mind. Harper Collins. NY. 2008

frontal lobes of their brains.⁵⁴ The frontal lobes are where we deal with such things as human interaction and empathy. This critical part of the brain typically develops at the end of childhood into early adulthood (Developmental time is different for males and females). To counter the negative effects of withdrawal – for any reason - we must ensure that our educational systems and our Americanization-childcare systems provide activities and programs that counter this loss of what may be considered humanity.

Changes in human development caused by technology must be dealt with wherever the child is. Failure to provide adequate programs to help the child speak competently, read with acuity, compute, understand our laws and government, and communicate, deeply affect everything the child does. Threads of Americanization continue through schooling, and through life.

⁵⁴Adapted from Small and Vorgan.

Ch. 7: What We Don't Know About Schools

Most of what we know about our schools does not come from educators. It comes from personal memories of schooling and information provided by politicians, lobbyists, sales personnel, and the media

Too much of our information comes from groups who do not put the best interests of children or our nation first. They are more concerned with the politics of education than the actual delivery of services to learners. The information we receive about schools is filtered by lobbyists who successfully get their economic interests before state departments of education, almost always at the cost of those being educated. A disturbing amount comes from testing companies that sell their products to schools. Textbook sellers also have a strong influence on what we think a curriculum should include. We get very little information from school administrators and teachers.

In the existing top down coercive system based on the 'teachers as laborers' – not professionals - model, educators are not free to speak out about issues crippling the schools without putting their jobs on line. They have the information we need but they have been prohibited from reaching out to the communities

they serve. Master teachers have not been able to speak out publicly about the policies and mandates that are limiting their ability to improve the system for kids. They are forced to stand back and suffer the consequences of non-educators who manipulate the system. Unfortunately, as others speak for them, the message becomes changed and distorted as it passes through the filters of external 'advocacy' groups who color the information with their own bias. Without the direct involvement of master educators, parents and community members make decisions about funding and education that are not tied to the needs of children and teachers.

For education to evolve and respond to the demands of 21st Century learners, educators must be free to speak. They need to actively bring the fight for kids and quality education to the streets by explaining to their community what is done now and what is needed for effective change. Educators cannot assume their only job is to shut the door and work with children. Their responsibilities must extend outside of the classroom. They must use any and all means to educate their community including the press, radio, television, school programs, chats, blogs and special programs offered through service organizations and community centers.

The failure of educators, school boards, and teachers associations to preserve comprehensive interdisciplinary fact-based education is a national disgrace. Their lack of opposition to moronic attempts to legislate educational cures such as No Child Left Behind, school choice, charter schools, virtual schools, vouchers, and tests in math and reading which are used to rate entire school programs, is disgusting and wrong.

National standards are corrupted by politicians and bureaucrats who succumb to pressure groups in spite of their commitment to keep the system effective for all. Listen to the politicians and the 'leaders' in the state or federal departments of education. Read their legislation. Observe their failure to help children. Notice when they lump all educational programs together. Read their reports which are politically correct and do not step on toes. Had they thought it through, they would understand that avoiding politically discomforting facts and sanitizing information does not help. In support of their own jobs, they ignore the fact that there is no fix or structure that can improve education with a one-solution-fits-all approach like No Child Left Behind.

Basic questions about what education is for and how children learn are being eclipsed by those who only rely on test scores to evaluate students, teachers, and the success of schools. They advocate that training for tests in reading and math (occasionally science) is the panacea for school improvement and reform. Educators know this is not true.

Training for tests is a memorizing process using routine or repetition, often without full attention or comprehension. That kind of 'teaching' assumes that student achievement is gained through the regurgitation of, not the application of, inculcated data. To these non-educators and ill-informed politicians the only parts of schooling that are important are math and reading test scores. They ignore the rest of the interdisciplinary comprehensive curriculum and the Americanization children need to contribute to their personal growth and to the nation.

Standardized tests allow politicians and administrators to justify actions and feel more in control through manipulated statistics.

Children learn at different rates - often affected by a host of factors including home environment and gender. There is no one fix to address the evolving needs of training programs (mastering foundation skills) and the development of each individual's use of data to apply to other situations (the application phase of education). What is needed in primary schools is different from what is needed at other levels of education. There are specific skills that must be acquired and those skills are different for every stage of development. Good elementary schools lay the groundwork. Middle schools build the foundations for the learned ability that allows students to turn concepts in their minds and apply them to other situations.

It is obvious that special age-related and development-related measurements must be used. Mastery is achieved when foundation skills are in place and the learner can apply that

information to solve or interpret other processes. The time of mastery differs with each child. It is no surprise to teachers that what is needed at the different levels of elementary education is not the same as what is needed in middle school or high school. If the politician or bureaucrat implements educational fixes without differentiating between levels and different stages of human development, he or she is part of the problem, endangers children, and damages the opportunity of children to successfully obtain the American Dream.

Mastery is measured by the accurate and effective application of facts that result in contribution. Mastery checklists, adjusted to the maturation and development of each learner, are the best way to measure student achievement. Again: Mastery is not measured by what a student can regurgitate on a test. Teaching ‘to the test’, is rote training of little value.⁵⁵ Tests don’t tell us why a child is left behind. Tests don’t measure brain development related growth. Tests don’t measure Americanization, and tests don’t provide opportunities to learn and master subtle gaps in knowledge.

⁵⁵Koretz, Daniel. Measuring Up – What Educational Testing Really Tells Us. Harvard University Press, Cambridge. MA. 2008. Koretz is a professor of education at Harvard. His work is a must read for those who believe tests indicate achievement or quality education.

Competent master teachers use both Summative (norm-based) and Formative (growth within the individual) evaluation. Most tests are summative and only determine where students score relative to norms. Whereas formative evaluation is based upon observation and monitoring the student's ability to apply what they are learning. Formative evaluation helps determine growth and mastery within the individual. If formative evaluation is not part of a plan to fix education, the plan will fail.⁵⁶

In the July 18, 2011 issue of USA TODAY, the paper tried to take on the issue of cheating on standardized tests.⁵⁷ The header set up the debate: *Today's Classroom Dishonesty*. What didn't get space is the issue of teachers forced to do something they know is wrong. Forced how? By putting their job and their school's credibility and funding on the line.

In our present model of school and teacher evaluation, and the emphasis upon the inculcation of facts, can you think of any quick-fix evaluation program that does not penalize teachers who work with the most damaged children – work with them so they can function in a training/learning environment? No, too often these teachers are humiliated and driven out because the damaged kids they work with don't score well on tests. They are often some of the best teachers in the system, but the rate of

⁵⁶I am in debt to Dr. Bruce Broderius, Dean of the College of Education at the University of Northern Colorado (Retired), for introducing me to summative and formative means of evaluation.

⁵⁷The article is in reference to a cheating scandal in Georgia, but it applies to every school district in every state where teachers are forced to conform students to tests.

growth for their damaged kids cannot be measured accurately against the same template used for other integrated learners.

Teachers all over the country are being forced to teach to limited, invalid tests meant to measure student, teacher and school proficiency. If they truly understand their responsibility to each learner, they know that tests used to place, punish, and placate are worthless.

Every teacher is forced to change instruction so students are not stigmatized by low test scores. Every teacher is forced to be dishonest when they teach for the test. Teachers are being professional when they place the interests of students first and protect their students, their jobs, and their schools from politically motivated, useless and destructive mandates.

The present approach to evaluating the effectiveness of teachers and the learning of students is based on the assembly line production model of the factory system. In the minds of too many, kids pass through the educational system grade-by-grade, as if on a conveyor line. As they pass through the school, facts are affixed to them. If a product (kid) is defective, the unit is given special help if it comes from the right cultural class, race, religion or economic set. Usually, minority students with missing parts are passed along (socially promoted) in the hope that they will drop out or be redirected into vocational training or some program thought fitting for defective kids.

The language of those who believe in the factory system is a dead giveaway to their beliefs. The dangerous book used by

many of these advocates for factory-style and marketplace-driven education, Politics, Markets and America's Schools,⁵⁸ advocates parental choice which determines the success of a school. The book fails to deal with the fact that by the time the parent learns enough about the education their child is receiving, and can get the child to another school that may or may not be better, the child will be irreparably damaged. That is, *if* the parent is able to discern what a good school program is. The 'best' school for student growth and development may not be the most popular school with the best test scores, public relations (PR), football team, location or newest buildings.

No educator or organization is giving parents the tools to judge the schools. There is no information for parent choice that identifies the need for interdisciplinary comprehensive fact-based curriculum-centered schools. Kids and parents may gripe about schools that inconvenience them by requiring hard work, involvement, and effective evaluation. Some reject these schools for the wrong reasons.

The book implies that the school is a factory generating a product that will attract parents and thus serve children. The book states that private sector schools are in a market supported by demand, thus public schools should also be in this market. This mindset of 'marketplace demand' heralded the cry, "School Choice."

In spite of the authors of Politics Markets and America's Schools limited understanding about how education takes place

⁵⁸ Chubb, John and Moe, Terry. Politics Markets and America's Schools. Brookings Institution. Washington, D.C. 1990.

and how the present systems can be improved, their book became popular and started a movement tens of thousands of American children are suffering from today. It does not accurately address viable solutions to the many ills of our educational system. It suggests strangling, not improving, existing district schools. It falsely concluded that district schools were not improving and should be abandoned.

Politics, Markets and America's Schools, has been widely used as a source of educational wisdom, without the input of experienced and competent educators. Their understanding of what really happens as children learn and master essential skills would have directed the authors to different conclusions.

The book has triggered actions against the educational system - specifically district schools - that are set to destroy the comprehensive interdisciplinary schools our nation needs to ensure an educated populace. The book enforces the ideology that if parents have school statistics based on testing data, they will select the school that scores highest. This type of information provides an incomplete picture of the school and its ability to meet the needs of students.

The 'school choice' cry, which has also become the basis for those who proffer *vouchers* as an answer to fixing education, has had a devastating effect on those who are working to improve public education. The idea that parents have studied and know the complexities of training and education, and that they can seek programs for their children that equal the perceived excellence of

private schools, makes no sense.⁵⁹ The educational changes necessary to break free of antiquated systems will never come from competition driven by false information. Changes will not result from product marketing techniques that are used to sell Chevrolets vs. Toyotas. This is yet another ploy of an industrial age system trying to rationalize ways to perpetuate its dominance - at the expense of our children and our nation's future.

We must deal with the mindsets of leaders who do not question the misapplication of disconnected assumptions.

A hero of mine, a man I have admired for a long time, is Robert Reich, one of our most experienced voices on public policy. Visiting friends in Southwest Colorado and doing some final editing of this book I downloaded, Aftershock: The Next Economy & America's Future.⁶⁰ The insights I gained, fit into the conclusions I was reaching about the evolution of America. His logic and information clicked. The book connected so many things that had been unclear to me. Toward the end of the work, I reached his comments on education. I ran headlong into his ideas about using vouchers to fix education. When he looked at

⁵⁹ The concept is that the rich send their kids to private schools that are far superior to public schools. The reality is that many private schools are mediocre. Most private schools equal the performance of good public schools. They may have symbiotic relationships with universities that cater to power, but the critical issue is *enhanced learning for the future*, not the preservation of power and wealth networks. Private and religious schools that excel have interdisciplinary comprehensive curricula.

⁶⁰ Reich, Robert B. Aftershock: The Next Economy & America's Future. P. 135. Vintage Books. N.Y. 2010. Updated 2011.

education, Reich did not go through the same objective process that he did with public policy. He accepted industrial age and product manufacturing concepts as a solution to the education of human beings. Here again, we have an example of prominent experts in other disciplines that make assumptions about the requirements of comprehensive education that don't apply.

Ch. 8: Education And The Political Climate

We have a large *fact-adverse* culture in America that is not only tolerated but actively given credibility and even idolized.⁶¹ At the present time it is politically incorrect for those in power to point out states that have failed to demand quality education for their children; states that have actively embraced ignorance.

Poor educational achievement is not an accident. Academic achievement can be mapped fairly closely to a state's dominant political ideology and that ideology's approach to education. The evaluation of our educational systems must be based on data which shows the demographics of illiteracy, ideological affiliation, school funding, and other factors that do not create the educated citizens America must have to stay strong.

On closer inspection of fact-adverse changes which are rampant across all states, one realizes they are mostly driven by special interest groups, primarily radical religious fundamentalists, whose beliefs and teachings are contrary to the findings of science and our need for a well-educated populous.

⁶¹The principle that anyone the Press presents as an 'expert' must back statements and claims with facts is often overlooked. It often seems like members of the press identify a small minority and blow its importance way out of proportion.

As an example, when you have been inculcated with the belief that sex education in schools causes promiscuity and thus pregnancy out of wedlock, data showing that the inverse is true is explained away as a plot to discredit God, his leaders, and common sense. Questioning these tenets is perceived as a failure of faith. Even data showing the correlation between the incidence of teenage pregnancy, educational levels, and 'religiousness' of the regions where it is highest, has no effect. For many of the people now dictating policy, reality is completely irrelevant, trumped by ideology and baseless superstition or misinterpretation of 'holy' works.

The case of "Kansas against Darwin" which resulted from the 1991 - 1995 recommendation of the Kansas Board of Education to remove the Darwinian concept from high school curricula is a classic example.⁶² Evolution is well-documented by scientific research, yet anti-evolution teachings are gaining a foothold in US schools, making our schools' science classes look more like what one would find in a Taliban madrassa than an enlightened learning environment. This fact-adverse movement is met with bewilderment (often ridicule) in the rest of the developed western world.⁶³

⁶² The Monkey Trial (Scopes Trial) was big news in 1925. Almost 80 years later the 'knuckle-draggers' came back, trying to discredit fact-based evolution.

⁶³ According to recent polls, between 45% and 55 % of the US population does not believe in evolution and prefers creationism or intelligent design. Note that the corresponding fraction in Western Europe is around 20%. In Islamic countries it exceeds 90%. In Turkey, it reaches some 50%.

People must be trained to have an open mind and weigh data as they determine validity. Obviously this training threatens the power of those who manipulate the ignorant. A ready example is the so-called Tea Party movement. This movement relies on the anger and frustration of the poorly educated who are mainly the result of schools which have been 'captured' and weakened by the fact-adverse. The Tea Party thrives on partial information, bare-faced lies, and incorrect assumptions.

This phenomenon is beautifully described by Rick Perlstein, in the May-June 2011 issue of Mother Jones magazine.⁶⁴ The article: *Fact-Free Nation. From Nixon's Dirty Tricksters To James O'Keefe's Video Smears: How Political Lying Became The New Normal*. Perlstein exposes politicians that have learned to garner votes by preying upon the ignorance and fears of the poorly educated. Blatant lies go unchallenged when people don't take the time to fact check.

Fact-adverse minority groups and *fact-based educators* are at war. The domination of education by the fact-adverse camp is having a devastating influence on our schools. The ideas espoused by its adherents are damaging education by tightening the purse strings, demoralizing teachers, privatizing schools, and undermining accountability, regardless of the consequences to our children and our nation.

⁶⁴ Perlstein, Eric S. "Rick" (born 1969) is an American historian and journalist. He is a former writer for *The Village Voice* and *The New Republic*. Perlstein's article is one of the most current and complete examinations of political lying. It helps us understand the elements of an effective lie.

We are constantly barraged with misinformation about how bad our educational system is. Fact-adverse opinions overshadow information from our most child-centered educators. We are rarely exposed to strong voices from experienced educators working in the system. The messages from master teachers are faint and barely heard even though their data-driven facts about the quality of most district schools supports, not discounts, their viability.

Education should provide all of us with good bullshit⁶⁵ detectors, but people who have not received a quality education often feel powerless. In our society every person has an opinion, but those who have the background and experiences – who have been there and done the work to qualify their opinions – should trump those who have not done their homework. But that is not often the case. Those who form opinions because of a voice in their head or some rant from a radio or TV commentator, support fact-adverse arguments and solutions to educational problems that don't work. In fact, they rely on outsourcing their critical thinking to others.

As an example, there are many among us who have received evening calls from a representative of the National Rifle Association. A voice, usually a woman's, begins a diatribe of fear-inducing lies about how the 2nd Amendment to the Constitution is being violated and our right to own guns will be taken away if we don't send money and support to the NRA. To any educated

⁶⁵ Frankfurt, Harry. On Bullshit. Princeton University Press. NJ. 2005. Being unconcerned with the truth or falsehood while aiming to impress and persuade.

person with a crap detector, calls like this are ludicrous. But to the ignorant, paranoia, fear, and anger at the imaginary ‘them and they,’ triggers the, “I’m a good citizen fighting for what is right” rationale.⁶⁶

These fact-adverse fundraising methods work. The unaware, uninformed, and easily led, send money. The organization gets more funding and political power. What can we conclude from this? Any changes in the educational system, even ones that are critical to our future in this century, can be opposed by groups who successfully manipulate the poorly educated.

Many of the people who are fact-adverse would have been freed of ignorance if we made certain they received foundation/training that adhered to set standards, and taught critical thinking skills that helped them learn how to evaluate the accuracy of information.

⁶⁶ One NRA caller made the point that our Founding Fathers fought the British for the right to own guns as guaranteed by the Constitution. Ignorance had degenerated into stupidity, and I laughed, never knowing that issue would become a major talking point in June 2011, when the peculiar politician, Sarah Palin, said: [Paul Revere], “...warned the British that they weren’t going to be taking away our arms, uh, by ringin’ those bells.” Later on Fox News, she repeated her revisionist version of history: “I didn’t mess up about Paul Revere,” she told host Chris Wallace. “Part of Paul Revere’s ride ... was to warn the British who were already there, that you’re not going to succeed, you’re not going to take American arms ... he did warn the British.” By that time, friends of Palin had accessed Wikipedia and added this revised misinformation. The fact-adverse have planted these lies and many believe them so they must be true. Luckily, Wikipedia is “self” correcting.

Ch. 9: The Dismantling Of Comprehensive Education: A Case Study

The federal mandate of education for all children discussed in previous chapters, coupled with equal rights and gender equality movements, has been a key factor in empowering millions of Americans to fulfill their American Dream. Yet, over the last several decades, organized minorities and profiteers have gradually dismantled comprehensive education for all. The same self-serving greed that brought America's financial system to its knees has successfully infiltrated American education. To create a vital education system for this century we need to first identify the motives and powers behind these changes.

Taxation is a major educational issue. One of the most effective ways ideologues have found to get their particular interests in place is to use the government's purse strings to starve programs they want to control or eliminate. Funding cuts, mandates like NCLB (No Child Left Behind), changes in tax laws, and states' rights are being used to break the back of comprehensive schools.

Our schools are vulnerable to these predatory practices for a number of reasons. The vital lies we embrace about education create a national mindset that facilitates the ability of pressure groups to close comprehensive schools. These lies are:

- ❖ Local control of our schools produces the educated citizenry necessary for representative democracy to work.
- ❖ The election process screens candidates and results in elected, balanced local school boards focused on our children and our national goals.
- ❖ Manufacturing principles can be applied to the education of human beings.
- ❖ Individuals and corporations should take over education and have access to tax dollars for profit.
- ❖ Schools can serve children and meet our nation's needs without an interdisciplinary comprehensive, fact-based curriculum, foundation/training programs, and only limited test-based accountability.

We must be vigilant in our efforts to protect the rights of all children. Those who dismantle our comprehensive educational system are able to do so because of *vital lies* that give us false information and direction and thereby weaken our nation.

The foundation principles that define America are eroding from within. We see stories in the media about the failure of too many Americans to understand their history and the working of the democratic process. Too many children and adults who have come through the system do not understand the role of a responsible citizen. They were not taught how local, state and national governments work. Only a frighteningly small fraction of

the populace partakes in federal elections and the democratic process. As a result, a well-organized minority that turns out voters has the opportunity to control an election and hijack education.

In my home state of Arizona, only 63% of eligible adults have bothered to register. Only 50% of the registered voters have voted in recent elections. That means that only 30% of Arizona's adult population has been involved in the selection of our local, state, and federal representatives. In most other states this fraction is somewhat, but not drastically higher.⁶⁷ Participation in local elections is even lower.

Such limited participation by the general population in the determination of our political, economic, and educational future, makes it easy for special interest groups to get representatives elected who foster their agenda and force the legislation of their issues. Arizona is an extreme example of this approach to modify the educational system based on a targeted effort to take over state government by a minority group. It is a microcosm of what is happening across the nation.

Decades ago, Arizona, along with most other states, set standards for public education curricula. The state defined what children need to know and be able to do in at least ten interdisciplinary content areas: mathematics, reading, writing, science, social studies and civics (local, state and national

⁶⁷ Compare these numbers with Western Europe. In Germany some 90% of eligible adults are registered voters. Typically 75% of these cast their votes in federal elections. The reality of US citizen involvement in the democratic process pales in comparison to the vital lie we have come to believe.

government), fine arts, comprehensive health, technology, foreign language, and workplace skills. This broad-based comprehensive education introduces these disciplines to children while they are in their most formative and receptive periods. It builds the foundation skills necessary for success in our complex society. Most quality district schools adhere to this interdisciplinary comprehensive requirement. However, most of the 600+ charter schools in Arizona do not.

More recently, representatives of minority religious groups, a handful of fact-adverse ideologues, greed-driven corporations, and individuals who want access to our tax dollars have taken control of Arizona government. Even though the largest group in this minority constitutes less than 6% of Arizona's population, through concerted efforts, their representatives make up more than 20% of the state's legislature and senior political decision-makers. Most leading positions in the state senate and house are occupied by members of one minority religious group.

How have they been able to erode the state's comprehensive educational concept? Through changes in the state's tax laws, widespread introduction of charter schools – including online charter schools (virtual schools) that are not schools at all - and funding cuts designed to destroy district schools. Why is this happening in Arizona and so many other states? Because these movements are led and funded by people who have figured out ways to pocket public tax dollars collected for the education of our children.⁶⁸

⁶⁸ For example, Rupert Murdoch said, "When it comes to K-12 education, we see a \$500 billion sector in the US alone." Mencimer, Stephanie,

In the United States, public education is funded by tax dollars collected at the state level. These funds are supplemented by federal dollars targeting special needs. Funds are allocated based on the number of students enrolled in each school. Decisions about how funds are distributed occur at the state level.

That has changed in Arizona. For over a decade there has been an ever-expanded way state taxpayers can direct a portion of their tax dollars to educational programs they support. They are allowed to deduct those dollars from what they would otherwise pay in state taxes.

Originally these funds could only go to supplemental public school programs, i.e., band and athletics. Now, after years of little steps, this group has even been able to erode the idea of separation of church and state. Public tax dollars, intercepted before they get to the general fund, can now go to public, private, corporate, and religious schools. The decision for the distribution of tax dollars is made by an individual taxpayer to support his or her individual biases. In addition, corporations can divert large amounts of the state taxes they owe, to schools they approve of.

In April 2011, a Supreme Court divided along ideological lines ruled that ordinary taxpayers cannot challenge government programs that use tax breaks to direct money to religious activities. The Robert's Court ruled 5 – 4 in favor of an Arizona 'scholarship' program for private schools that has mainly

No Child Left Offline. Mother Jones, November-December 2011. P. 43-47. The dollars he is talking about are from the taxes we pay for education, for our children, and until recently, not for corporate profit.

benefitted religious schools by offering dollar-for-dollar reduction in the income tax of people who participate.

The vehicle used for curriculum change and taxpayer support of religious schools and schools run by political ideologues (including digital learning and virtual schools), is the charter school movement. The Arizona State Legislature passed the Charter School Law in 1994. Since its inception, Arizona has created over 600 charter schools. These are public schools that compete with existing comprehensive district schools for tax dollars.

The State Board of Education originally bought into the idea of charter schools IF they were held to strict, established and proven state standards. A benefit of charter schools was thought to be their ability to modify the educational system by providing competition that would force district schools to improve. The idea behind charter schools was to challenge and change – by proven demonstration – those district schools which are not responsive to children’s needs.⁶⁹

Charter schools are public schools. They receive funding from the state much like district schools. The idea, as first put forward, was not to replicate facilities and overhead in hundreds

⁶⁹ It is important to note that critics of district schools did not act on factual information. Many district schools were/are effective. Most district schools were already in the process of making their curriculum and teaching more vital. In the meetings I attended, where charter schools were agreed upon, there was a well organized minority present who decided they could to kill district schools, get private access to educational dollars, use education to support ideological and religious programs, and make profits from tax dollars. The School Choice movement took over, based on misinformation and intentional lies.

of little partial schools - as has happened - but to move around the bureaucracies and structures which limit district school change, and to create better ways of schooling. The imagined results from these new and proven programs would then be introduced in the district schools which have the facilities, support staff, and tax base necessary to deliver comprehensive education.

After more than a decade this 'solution' has not come up with new ways to improve education or our district schools. In fact, it has damaged comprehensive educational programs throughout the state by bleeding off tax dollars and forcing cutbacks in district school operating funds.

Sadly, when the State Board of Education demanded accountability, the politicians in control of the Legislature cut them out of the process and created a separate State Board for Charter Schools which waived criteria in favor of their agenda. An organized minority controls this board.

Under the State Board for Charter Schools, certification requirements for teachers are lax. A charter school can custom-craft its curriculum. For example, if a school doesn't want to teach fact-based science, it can modify the curriculum to exclude it. Very few charter schools offer the interdisciplinary, comprehensive education found in district schools. Even the state oversight and accountability promised by the movement has been gutted through failures of the State Board of Charter Schools to enforce the intent of the law to deliver comprehensive education to children.

In reality, though, any cult or religious leader with a hunger to access young minds and inculcate their ideologies can

use public tax dollars to operate a charter school. Any ideologue who believes schools are factories and that marketplace competition and product control mechanisms will improve the products of education, can play educator and experiment on children. This marketplace concept is applicable to widgets, but highly destructive and hurtful when applied to human beings. The marketplace approach also assumes that parents understand the complexities of education, which of course most do not, just as many teachers do not.

In Arizona, state mandated AIMS (Aptitude Inventory Measurement Service) testing is supposed to be the mechanism for accountability. It has not worked. Untold numbers of students can be denied a quality education – be severely damaged – before these extremely limited and meaningless test results are shared and distraught parents vote against the school by enrolling their child somewhere else.

As a result of this ‘partial schools’ approach to education, courses can be skewed and manipulated by the charter school governing board, and by the state limiting dollars going to district and charter schools...despite a national imperative to improve math and science education to bolster our position in the global arena. Art, music, humanities, health and sex education, a balanced American history, civics (local, state and national government) and the Constitution, information about the United Nations, physical education and other courses that encourage the development of thinking individuals and good citizenship can readily be misrepresented or done away with.

In fact, what curriculum there is in a charter school or virtual school may have been written by fanatics or fundamentalists or, equally as scary, the profit-driven individuals and corporations trying to get their hands on our tax dollars. For example, studies of the Constitution might skip over the 14th Amendment and make claims about the Bill of Rights that are no longer applicable. Schools could teach that states do not have to acknowledge or follow the US Constitution. Or question the need for a cohesive national philosophy (state's rights vs. federal power).

You might feel that this is an exaggeration. Here is a current example of how 'education' is being perverted. It is excerpted from a recent article by Garrett Epps entitled: *We The People. The Far Right Has Stolen The Constitution. It Is Ours To Take Back.*⁷⁰

In October I spent a crisp Saturday in the windowless basement of a suburban Virginia church attending a seminar titled "The Substance and Meaning of the Constitution." I was told that the Constitution is based on the Law of Moses; that Mosaic Law was brought to the West by the ancient Anglo-Saxons, who were probably the Ten Tribes of Israel; and that the Constitution restores the fifth-century kingdom of the Anglo-Saxons. The

⁷⁰ The following is excerpted from an article in The Nation written by Garrett Epps a former Washington Post reporter. Epps is a recognized Constitutional Scholar. The article was reprinted in the Utne Reader, May-June 2011 issue.

instructor, an Arizona judge named Lester Pearce,⁷¹ also declared that virtually all of modern American life and government is unconstitutional. Social Security, the Federal Reserve, the Environmental Protection Agency, the Civil Rights Act of 1964, hate-crime laws – all flatly violate God’s law. State governments are not required to observe the Bill of Rights, and the First Amendment establishes “the religion of America,” which is “non-denominational” Christianity.

Pearce’s brother is [was recalled in Fall 2011] Arizona State Senator Russell Pearce, author of the anti-immigration law SB 1070. So it wasn’t surprising that Lester tended to digress about how he cracks down on Mexican immigrants in court. More astounding was that he had the rapt attention of 50 attendees-earnest citizens who had come to learn about the country’s Constitution.

And what they were being taught was poisonous rubbish.

What we have to protect against are publically funded indoctrination schools where students are inculcated with religious, cult and extremist interpretations which have little or no basis in fact.

It is important to note that some charter schools are free of religious and political agendas. Many are led by good people whose hearts are in the right place. They may have insights that

⁷¹ Lester Pearce is a former lawmaker who is poised to become the next presiding judge of the justice courts. He has been taking his cult’s ideas on tour.

could improve public schools for all. They are unaware they have been used and will be abused. Given imposed financial limitations and the difficulty of providing a full, comprehensive curriculum, their charters are *partial schools* doing what they can, which is not enough. Parents and taxpayers need to be aware of their limitations and the problems a *partial educational program* will create for their children and our nation.

The charter school movement has spawned new businesses - including banks - that siphon off public funds for the education of children enrolled in charter schools. Most of these costs, which are paid for by the educational dollars allocated to children in charter schools, are not present in district schools. It is embarrassingly evident that the charter schools program has created hundreds of partial schools with limited facilities and resources, within blocks of comprehensive schools with land, buildings, certified teachers, sports, math, reading, arts, music, drama, choir, and theatre, the sciences, languages, health, etc., at great cost, using dollars removed from district school budgets. Why? Because a small group of ideologues decided that they could take over public education, gain control of tax dollars, and profit. And, the rest of us let them.

In addition, many charter school operators have benefitted from the opportunities for personal financial gain provided by the state at the expense of charter school enrollees. A school operator may buy property and equipment which is then leased to 'their' charter school. A for-profit company can be contracted to provide curriculum and other 'resources' which are

provided after profits are taken. Using income from the state, the operator can pay off real property and end up owning it free and clear. When the school closes, moves to a new location, or the operator opens new charter schools – which can be non-profits contracting with profit-motivated companies - the operator can end up owning other properties.

Even as these increased expenses create additional burdens for taxpayers, and deprive large numbers of students a quality education, the charter school movement is being intentionally expanded. Costs rise and district schools are damaged, not improved. *Thousands* of children are denied a quality comprehensive education. The state economy is damaged as few industries will move to a state that does not provide a quality education for their employees or their children, or a skilled workforce for the 21st Century.

When so much money can be diverted from services to children, ruthless criminals take advantage of the weaknesses in the system. In most states, investigations into the most egregious cases of misuse of educational dollars provided for children in charter schools are underway.

A recent article in the Arizona Republic, *Arizona taxpayers funding firms to run online schools*, by Anne Ryman and Pat Kossan,⁷² exposes the abuse of the taxpayers' money by the State Department of Education and the cadre of ideologues in the Legislature. They are winning the battle and getting access to public tax dollars they can use to destroy district schools and fund

⁷² The Arizona Republic. December 13, 2011.

schools that teach their own biases, or can be replaced by their own profit making corporation programs. The article begins:

Every year, tens of millions of dollars in state taxpayer money go to for-profit companies to run Arizona's largest K-12 online schools. That has prompted some educators to warn that the state is putting money in the pockets of shareholders and executives whose priorities are more about profit and personal gain than quality of education. State-approved online schools are public schools that Arizona students can attend for free. The five largest are charter schools. Two of the schools are for-profit companies. The other three are non-profits but turn over anywhere from about half to almost all of their money to for-profit companies to run the school or provide services.

This particular access to taxpayer dollars is based on the unproven and damaging idea that online education works, and that this 'by-pass the public schools' approach provides learners with the skills necessary to make a contribution to themselves and to society.

Continuing with the article:

"The controversy arises when a single for-profit company is hired to run a public school, provide the courses and hire teachers and the principal, which is happening in some online charter schools," said Michael Barbour, an education professor at Wayne State University in Michigan who researches online schools.

"Never in the history of the United States have we abdicated our responsibility for public education to the private

sector," Barbour said. "We are essentially handing over government funds so we can run public schools the same way we run a business."

Actually, in Arizona it has little to do with running a business and everything to do with power, greed, and profit. "It will only be a matter of time before taxpayers have had enough," I heard someone say. Are Arizonan's willing to have more lost generations? What will be the impact of the wrong decisions for the wrong reasons that have misled Arizona and damaged our children?

Education for Profit, is the title of a recent article on Talking Philosophy the Philosopher's Magazine Blog, January 2012. If there are any doubts about the damage these pirates have done to learners, read General David Petraeus's comments. They give an insight into the politics and lobbying efforts of profiteers and the negative effects of profit making companies on military veterans.⁷³

The article concludes:

Unfortunately, the for-profit schools for-profit model means they have plenty of money for lobbying and hence they seem to have been able to get their way in Washington. As such, it seems likely that education will continue to decline in the United States. But at least some folks (including lobbyists and politicians)

⁷³ Petraeus, David. *Education for Profit*. Talking Philosophy the Philosopher's Magazine Blog. Posted by Mike LaBossiere. January 13, 2012.

will be making some sweet profits. That is what really matters, right?

There can be no doubt that Arizona is leading the US in the destruction of comprehensive, fact-based education and creating models whereby cults, religious groups, and profiteers can access tax dollars to push their agendas or fill their pockets at the expense of children. Many other states are considering Arizona's techniques. Groups led by Jeb Bush and his Digital Learning Council, Rupert Murdoch's News Corp., and the governors of Ohio, Florida, New York, and Utah (to name just a few of the worst) buy into the 'profit-from-education-tax-dollars' movement.⁷⁴ The state of Texas is such a nightmare of self-aggrandizing, fact-adverse politicians and religious nuts that the travail of children in schools there will require major research and the exposure of those who have damaged children's hopes for sharing the American Dream.

On the elementary, middle, and secondary levels, Arizona has reached new lows and is rated as one of the worst, or the worst state in support of K-12 education.⁷⁵ Two important national studies are used to evaluate the results of each state's educational success or failure. One is a state-by-state breakdown of SAT scores compiled by the College Board. The other is a comprehensive study by Morgan Quinto Press, an independent research company that specializes in state data. Here is the

⁷⁴ IBID. Mencimer, Stephanie

⁷⁵ Arizona has two excellent Universities that are fighting to maintain high levels of research and academic achievement.

Morgan Quinto Press – Main Street.com conclusion regarding Arizona. It leaves no doubt that the programs put in place over the last two decades have damaged untold numbers of children and undermined the American Dream:

Arizona was ranked as the worst state according to Morgan Quinto's list. Students received dismal scores on their math and reading proficiency tests in middle school and just 84% of the population has graduated from high school. A recent survey this year claimed that Arizona's K-12 education is the fifth worst [45 out of 50] in the nation. Another unrelated survey found that the vast majority of high school students in Arizona (96.5%) would be unable to pass a basic citizenship test if they needed to. Too dumb to be American? That's a problem.⁷⁶

We must bypass the hijacked systems which control education and ensure that, with federal guidelines, states guarantee every student an interdisciplinary, comprehensive, fact-based education as the foundation for schooling in the Information and Interactive Age. To build and maintain our nation we must have cohesive principles such as common standards and purpose, not the anarchy of divergent interests taking over our schools to manipulate the minds of children and make money by accessing educational tax dollars.

⁷⁶ Seth Fiegerman, *Dumbest States in America*. MainStreet.com. Posted January 21, 2010. Reference: Morgan Quinto Press. Google: Morgan Quinto Press.

Ch. 10: Taxation – The Lifeblood Of Education

Every major function of government which is essential for our national wellbeing such as the military, interstate highways, research, and ... is supported by federal revenues. Yet we believe the *vital lie* that property taxation is the right way to generate revenue for education.⁷⁷ To understand the limitations of property tax support for education, do a switch. Imagine America's schools supported by federal tax revenues. Imagine funding America's military (defense) through property taxes. It is unthinkable.

Schools, like other programs essential to our survival, must be supported by federal tax revenues. We must shift the funding paradigm. Why are those who own property responsible for supporting schools? Education is the key to America's future. It may be the most important key. Support of education should not be dependent on property taxes or state and local economies.

Of the major issues that affect our educational systems, the most angst is generated against taxation. It is an issue that those who use misinformation to unite people bugle to win

⁷⁷ Starting in the 1920s, states have provided additional funds to reduce inequities caused by differences in the tax bases of local communities. Based on ADA (Average Daily Attendance) districts are given state funds that come from other sources, not property taxes. These *Foundation Programs* to give poor`

support. I recall a conversation with a woman who was railing against recent medical care legislation. *“Stupid, horrible, completely wrong thinking,”* she emoted. *“We have to get rid of this goddamn socialist black president and those horrible people in government who think that way.”* Minutes later she was announcing the fact that she just got her first Social Security check, was now on Medicare and could get the medical treatment she needed. *“How wonderful to be 65,”* she purred. There are a lot of poorly educated people like her. If led, they can bring America to her knees.

People who receive more services and benefits from taxes than they pay for, rally against taxes that support benefits they will not do without. Highways, infrastructure, medical research and care, disease control, education, utilities, police, fire, defense, immigration, public lands, agricultural subsidies and ... the list of services they demand is amazingly long.

Part of the irony is that many of those carrying placards and voting against taxation don't understand that the government programs they consume are often paid for by others in parts of the country that generate more tax revenues. They don't admit that they do not pay their fair share of the cost of the services they consume. Arizona is such a state.⁷⁸ It receives more from the federal government than its taxpayers pay in federal taxes so that

⁷⁸Arizona taxpayers receive more federal funding per dollar of federal taxes paid than the average state. Per dollar of federal tax collected in 2005, Arizona citizens received approximately \$1.19 in federal funds.

it can provide services its citizens cannot live without. Yet, a vocal minority of the ignorant scream against government and taxation. Are they protesting the state and county property taxes they pay, or federal taxes? Maybe it is people who resent paying their fair share.

Even when states, and counties within states, try to equalize funding for rich and poor school districts, the ability to fund and deliver quality schools is hit or miss. Ultimately, the system in place cheats children.

Ignorance is treatable. If left untreated it degenerates into National suicide.⁷⁹

Because the “No new taxes” cry comes from a well-organized minority, we don’t hear from the average American, who, if called to help, would pay more taxes because it means continuing programs they depend on and that help their fellows. They understand why they must pay more for wars and to retire war debt, support public education, public health, employ people, repair the country’s infrastructure, and control our national debt. Even the charge that the government wastes money, as if corporations don’t, does not discourage citizens who know they must pay for services they consume; taxes necessary to keep our nation strong. These are citizens who believe in **No Taxation Without Representation**. Citizens who understand that we

⁷⁹ In 1934, Jean Piaget, the Director of the International Bureau of Education, declared that, "Only education is capable of saving our societies from possible collapse, whether violent, or gradual."

elected the politicians who got us into wars and into debt. It is *our* government, not *the* government. We all must share in the benefits and pay for the mistakes.

Ch. 11: The Benefits Of Strong Federal Influence

When we talk about increasing federal influence, the immediate argument we are programmed to respond with is the *vital lie* that the federal government cannot manage anything well. There is no doubt that a strong federal influence on state departments of education successfully built a united country. We need federal guidelines to correct educational misdirection and to guarantee the rights of every child regardless of the state they live in⁸⁰

Those who do their *Don Quixote* thing against the federal government go away when they have to provide facts – specific examples of ills that are not being addressed – to support their charges and calls for states’ rights to supersede federal

⁸⁰Federal influence has been strongest since the 1950s. The federal commitment to improve and finance public schools expanded enormously when Congress passed the National Defense Education Act of 1958 and the Elementary and Secondary Education Act of 1965. In these two landmark statutes, Congress addressed for the first time such broad problems as expanding educational opportunity for poor children and improving instruction in pivotal but usually neglected subjects such as science, mathematics, and foreign languages. Other federal acts that addressed educational issues in this period were the Vocational Education Act of 1963, the Manpower Development and Training Act of 1963, and the International Education Act of 1966.

constitutional guarantees. The facts about our government are enlightening. For example, Medicare and Social Security are run well and provide regular, reliable services to millions of Americans. They are not perfect, nothing is. But, we often over-focus on their failings without recognizing their effectiveness.

Based on a few bad examples, we tend to imagine that everyone in a position of power is corrupt. Taylor Caldwell in her 1970s book, Captains And The Kings,⁸¹ states this fear of government clearly:

There is indeed a 'plot against the people,' and probably always will be, for government has always been hostile towards the governed.

Pogo countered this fear:

*We have met the enemy and they is us.*⁸²

Widespread access to the internet is changing everything. With the dawn of the *Information Age*, government can no longer be fueled by secrets in smoke-filled rooms, theft in the name of special treatment, and the lack of everyone knowing what politicians are doing. The age of power-mongers and 'Rove-style'

⁸¹Caldwell, Taylor. Captains And The Kings: The Story of An American Dynasty. Doubleday and Company, Inc. 1972.

⁸²Kelly, Walt. (1913-1973) Cartoonist. Pogo is the central character of his American comic strip.

manipulators is rapidly passing.⁸³ We may have had the best government money can buy, but in the *Information Age* the power behind politicians can no longer be hidden from an educated populous who demand honest accountings. FactCheck.org and monitoring sites like WikiLeaks are examples of tools now available to the general populous.⁸⁴

Facts and hard economics, not lies and half-truths, should determine the future of American education and the federal guidelines necessary to protect each citizen.⁸⁵ We are now more than a decade into the *Information Age* which makes it possible for *We The People* to expose dishonesty and demand responsive leadership. That has never been possible before. Old arguments against government that were used by states' rights advocates and those who do not want a populous educated in ways they do not approve of, are harder to sustain. With adequate federal guidelines we can redirect state departments of education, school districts, and the way we manage education, and know that quality comprehensive, interdisciplinary, fact-based education is

⁸³Lee Atwater (deceased) and Karl Rove are political manipulators known for dirty tricks and dirty politics. They do not hesitate to lie and blacken opposing candidate's reputations. They used almost any means to justify the end - their candidate's election. America has paid a high price as a result of their manipulations.

⁸⁴It is important to note that governments can use the same technology to track and stop those who are critical of their agencies and the protesters who threaten their power.

⁸⁵The cost of maintaining 50 separate state departments of education is required under the Constitution. The cost of thousands of unequal school districts and unequal charter schools is far in excess of what taxpayers can afford. Without federal direction, children are being deprived of the education they need today, and for the 21st Century, and taxpayers are being ripped off.

guaranteed to all.⁸⁶ The need for strong federal guidelines to ensure every citizen a quality education is obvious at this time when we suffer from the lack of knowledge many citizens have.

During the G.W. Bush administration, federal power was misused when the federal government mandated a program for educational accountability called No Child Left Behind. NCLB was based upon false assumptions and political agendas that proved to be damaging to American education.

The federal direction that is needed to guarantee that each state provides comprehensive education is to set minimum standards for the education of every citizen. It is not a simple answer to complex educational problems. The Department of Education was hijacked. Politicians did get away with this type of mandate. With the exposure of the damage brought about by No Child Left Behind, this type of political tinkering will not be supported in the future.

SUMMARY PART I: What we think we do to and for our children is quite different from what we actually do. What we think is happening for our children and the future of America, is based

⁸⁶Under the Constitution the responsibility for K-12 education rests with the states. There is also a compelling national interest in the quality of the nation's public schools. Therefore, the federal government, through the legislative process, provides assistance to the states and schools in an effort to supplement, not supplant, state support. The primary source of federal K-12 support began in 1965 with the enactment of the *Elementary and Secondary Education Act (ESEA)*.

upon lack of knowledge about how education and our schools work and what a whole or complete school should be. As we search through effective programs and identify what must be continued - what we must enhance and tailor for the *Information Age* and the changes brought about by the *Interactive Age* - we find whole areas where the ideals of parents and educators have been subverted by organized minorities and privatizing movements like school choice. Our factory system is outdated and ineffective; it doesn't fit our time. The needs of 21st Century learners are very different than those of students who came before. The widespread integration of technology at a very early age has changed the way children learn, the way teachers educate, and the support systems required for effective instruction. Virtual world environments are expanding out-of-school learning opportunities. The world has changed.

Perpetuating this system is national suicide. Evolving away from a petrified, coercive, self-serving system is difficult. Many feel that it is impossible to change our schools. Yet change is being forced upon us. If the system is not transformed, learners will use technology to bypass it. I am certain the music, publishing, and telecommunication industries never imagined they would lose their dominance in such a short period of time.

What happens for our children in school is critical to our survival. If we fail to evolve our schools, we lose. If we destroy interdisciplinary comprehensive fact-based schools based on a central curricula, we fail. There are hundreds of highly qualified educators and thinkers who see the whole picture and know what has to be changed if education is to keep us vital in the 21st

Century. Unfortunately, there are hundreds of ill-informed, often fact-adverse politicians and educators who try to profit from the vacuum created by the lack of educational leadership.

When we are blinded by lies we tell ourselves, and the ways things were organized in the past, we fail to see the flaws in our outdated systems. On the one hand, we do not believe that states have the right to deny any citizen their rights as guaranteed by the US Constitution. On the other hand, states captured by minority groups are able to do just that when they deny children the right to a fact-based, interdisciplinary comprehensive education.

Part II begins an examination of what must happen to education in the *Information* and *Interactive Ages*; education as it reforms itself for the century ahead. This new Information is focused on education enhanced with resources made available in virtual space. It is education that focuses on the individual's access to life, liberty and the pursuit of happiness. It is information that recognizes the many improvements being made in our district schools and builds on that solid base.

It is important to recognize that virtual education programs are in their early developmental stages. We are learning what is good and what is not good about the application of new technology to education. There is no body of curricula or proven resources we can use. Educators at all levels of instruction must adapt to the new reality and create these programs. If the education system had been more adaptive to change, the transition would be more gradual. Now, the re-design must be

more dogged and dramatic. In less than a decade, the world has changed, as have the brains of the digitally literate populations we serve.

Part II: Education For The 21st Century

Ch. 12: Educational Change And Our New Powers

Citizens educated in the 'old way' will have to work hard to adapt to new systems and be able to handle all the information and change brought about by the *Information Age* and the *Interactive Age*. Piers Anthony, in his science fiction novel Macroscope (1969),⁸⁷ examined what happens when a vast amount of knowledge is suddenly made available. In Anthony's novel, the macroscope is an instrument capable of accessing the central data base of galactic knowledge. It can be used for eavesdropping upon the communications of advanced civilizations. The effects of massively advanced technology in the hands of immature species were so dangerous that advanced civilizations permanently jammed the macroscope's "channel" with a video signal that destroyed the mind of any 'immature' viewer.

As we transition from industrial-age thinking to the new powers we have gained at the edge of our understanding, we must re-define almost everything we know about research and the acquisition of knowledge. Perhaps 70% or 90% of a degree program was based on finding information, not applying information to solve problems or present new conclusions. What is a Ph.D. worth when it is based on limited information gathered

⁸⁷Piers, Anthony Dillingham Jacob (born 1934 in Oxford, England) is an English American writer in the science fiction and fantasy genres.

prior to the internet and global access to research data? In the last century, data was laboriously dug out of dusty tomes. It was difficult to know about complementary research in other countries around the world. The only parts of my '70s era doctoral degree of value now are the parts where I applied what I learned and made a contribution with that information.⁸⁸ What about the rest of my studies? School law for example? We spent a quarter of the school year learning how to use a law library and glean information and case precedents. Time wasted that way is no longer acceptable.

What we think we know must be examined in the light of information from sources in other languages and found in other libraries, archives and research centers. Sources that were available, but not accessible due to language, time, distance, and other barriers. An example of this is the book by Gavin Menzies,⁸⁹ 1421 The Year China Discovered America. Scholars are scrambling to check his sources and verify or reject the information he presents. If his conclusions are basically true, then all of the work

⁸⁸Berger, Edward F. Crow Canyon: Pioneering Education and Archaeology on the Southwest Colorado Frontier. 2nd Edition. Author House. 2009.

⁸⁹Menzies, Rowan Gavin Paton (born 14 August 1937) is a retired British submarine commander and author. He is best known for his controversial book, 1421: The Year China Discovered America, in which he presents his hypothesis that ships from the fleet of a Chinese Admiral visited the Americas prior to European explorer Christopher Columbus in 1492, and that the same fleet circumnavigated the globe a century before Ferdinand Magellan. Menzies' second book, 1434: The Year a Magnificent Chinese Fleet Sailed to Italy and Ignited the Renaissance, extended his research, frustrating lots of folks on the European continent.

they presented about the history of exploration (perhaps it is necessary to say European Exploration) is based on partial research and selective assumptions. If he made this up, as many are praying he did, then new research in more extensive collections world-wide will prove it. What is certain is that what we come to believe and teach our young will be quite different than in the past.

The gravity of the change taking place cannot be discounted as improbable. The Information and Interactive Ages are here. What we have to fear is becoming a “horrible manifestation of a cultural lag.”⁹⁰

In the *Information Age*, research means knowing how to redefine search criteria so *bots (web robots)* can locate multiple sources of information on the web. What once took hours if not days or years of researching is done in seconds.⁹¹ The new educational leaders must know how to use the information, not find it; how to sort, filter, and verify. Many dissertations that once gathered dust in university storage can be digitized to become part of an international database. The potential to increase the breadth and depth of research is dramatic; the ease of communication is unparalleled.

⁹⁰A charge directed at students by my favorite history professor, the late Dr. John S. Welling, at CSC/UNC.

⁹¹Re-searching refers to finding the work of others and interpreting it or applying it to current understanding. It differs from scientific searches for new combinations and applications of data which are based on the re-searched foundation data provided by others.

Concerns arise as we evolve our schools to keep up with changes demanded by new electronic operating systems which make it possible for learning to move from closed place-based systems into virtual space where seemingly unlimited resources can be created. Some succumb to the *vital lie* that portal-based (through the electronic looking glass) experiences are isolated and individuals lose the ability to engage and interact with other humans. It may look that way if you haven't traveled in the social networks built in virtual space. Those who have know the inverse is true. People are meeting in virtual space, chatting, building relationships, telling stories about their daily lives, joking, working together to accomplish common tasks, conducting business and engaging in actions that demonstrate personal values. Research is showing that a surprising number of these contacts result in real life friendships and permanent relationships.

Truth is, there are limits to the real-world opportunities we have now. We are limited in the ways we relate, learn, work, and play. Immersive virtual environments can be collaborative beyond what we ever imagined. *Multimodal* (utilizing different senses) communications between individuals take place in immersive environments. There may be limitations, touch and smell for example, but rather than inhibit social interactions, immersive *multi-modal* experiences can increase them.⁹² These virtual platforms are becoming more and more sophisticated as demand and utilization increases.

⁹² de Freitas, Sara. *Serious Virtual Worlds, A Scoping Study*. 2008.

As our education system transforms, it must ensure that all students have the skills necessary to be part of interactive humanity. Research into possible effects of increased use of technology on brain development and learning is necessary.

To better understand how increasing numbers of learners are dealing with these new powers, picture the work stations of digital natives or acculturated digital immigrants. Their workstations consist of two wide-screen monitors. An advanced CPU with the capacity to run multiple programs at the same time (multitask). On the monitors the students have pulled-up blogs, movies, news reports, Facebook, Twitter, YouTube, chat boxes, and a global mapping program. These learners, participating in immersive virtual environments, are engaged in multiple activities that require diverse skills to quickly process tasks. Each day, educators face classrooms full of students who engage in this type of activity.

Many of those writing about the ability of individuals to do more than one thing at a time, assume that individuals are doing multiple tasks at the *same* time (multitasking). That may not be the case. Kate Shaw, in a recent article in *Science*, *Bottlenecks In The Brain Limit Our Ability to Multitask*, points to recent research that suggests multitasking is a misnomer.⁹³ To an observer, the operator is involved in all or most of these functions at the same time. But, as my son has pointed out, the operator is not focusing on all or many of these functions, but rather rapidly cycling through them, one at a time. The operator is carrying threads in

⁹³Shaw, Kate. *Bottlenecks In The Brain Limit Our Ability To Multitask*. *Science*. August 2011

his brain that tie the various programs together, but is not watching the movie and blogging simultaneously.

Think of yourself standing before two pitchers launching balls at different speeds and declinations. Can you catch one with each hand at exactly the same time? If you can, you are multitasking.⁹⁴

Educators are interacting with students who are used to learning from multiple, multi-sensory sources. These 21st Century learners are interactive in their approach. They will not engage and remain attentive when presented with the old lecture model. Teaching strategies have to adapt. Delivery systems used in instruction are directly impacted. In many ways this is a whole new science teachers must be aware of. It is another reason teachers must be the best and brightest digitally-literate educators we can find.

Some teachers define these learners as misdirected because they threaten the very roots of the educational system in which these educators feel successful. Many digitally-literate learners question the value of educational programs and degrees they are offered. There may come a time in the near future when employers will forget 'documents' and examine what individuals can offer, with or without degrees.

As an educator, I had never imagined a more vibrant educational environment than the one I knew. Now, through the portal, everything I never imagined is within reach. My fellow

⁹⁴Berger, Alex. Comments blogged on his VirtualWayfarer.com web site.

learners and I can be connected in virtual space viewing great art at the Musee d'Orsay in Paris, interviewing an artist in Florida, and carrying out a group discussion in a virtual coffee shop including students from interdisciplinary groups around the planet.

What is troubling is a problem similar to the one that Piers Anthony wrote about in 1969, in Macroscope:⁹⁵

Near the end of the 20th Century occurred the most epochal scientific breakthrough in the history of man: the discovery of the macroscope. In resolving and making coherent the information carried on macrons, it brought the entire universe within man's range of vision, revealing levels of technology vastly beyond anything dreamed of by man.

There don't seem to be any parameters to our new world of knowledge and interaction. There are no built-in guidelines for use or abuse of all this new power.⁹⁶ There may be mind-blowing energies connected with it as Piers suggests. Changes in brain development may be among these. Beginning research is showing modifications to the human brain caused by immersion in technologically created activities.⁹⁷ It may become the job of

⁹⁵IBID. Piers Anthony.

⁹⁶Individuals in the US government who want to protect their clients from scrutiny are always attempting ways of censorship, like the current Stop Online Piracy Act (SOPA) which has elements of censorship many fear.

⁹⁷IBID. Small and Vorgan.

educators to maintain healthy brain development through balanced immersion in virtual and physical space.

The information available and the networks woven across people, places and time may be so far ahead of our social development as a species that it collapses systems we depend on for survival.

We are being forced to redefine almost everything we do. Work, for example.⁹⁸ Work for pay to survive? Work to produce things? Work to provide services? Work for a company so you get health benefits? Work in a cubicle? Work in the fields? I'm certain all these definitions will be by-passed by new ones. How will food, clothing and shelter be provided when people spend most of their time creating, learning, serving and playing in and out of virtual space? Droids may take over farming and robots may operate the systems necessary to build and operate the portals we travel through.⁹⁹

Does this sound like science fiction? Now that scientific and technological research, innovation, and development is happening by cooperation on a world-wide scale, droids and robots are a reality. Things too fierce to mention now appear on

⁹⁸Reeves, Byron and Read, J. Leighton. TOTAL ENGAGEMENT: Using Games and Virtual Worlds to Change the way People Work and Businesses Compete. Harvard Business Press. 2009.

⁹⁹Niiler, Eric. *Meet Prospero: Robo-Farmer on Six Legs*. Discovery News. Tech News. Dec 21, 2011. Swarm technology, game theory and infrared communications are being used to advance farming. Instead of using tractors, farmers are turning to robots to plant and harvest crops.

battlefields. New energy slaves serve us in our homes and on our persons. If you have food, clothing and shelter what do you give in exchange? Why should access to basic human needs have to be earned?

We can utilize future options if we bring forward and adapt the parts of our existing systems and processes which work for our future. Identified, these necessary elements will be models or archetypical patterns proven to be essential parts of our new operating systems. Working together collaboratively through virtual connections, we must identify the structures and processes, the core elements, that provide a base for an effective educational system. The newly discovered powers of our microscope can help us do this. As we build our understanding, we may begin to understand the limits and extents of our new powers.

Ch. 13: Redesigning Education: Concepts

Consider these concepts... Discuss them...

Argue for or against them... Get others involved.

- ❖ Schooling is what happens when the elder generation passes on to each succeeding generation structures and systems, information, methodologies and techniques they believe necessary for the continuation of society. The problem is that *vital lies* keep us from discarding old habits and practices. In their place we need appropriate information and social and cultural requirements based on an evolving reality. In our existing system there are no effective pathways for major changes in society, technology, and the needs of learners who must be prepared to function in a society unlike the one of our elders.

- ❖ Education cannot become chaos. Parameters must be in place for every level of learning and every discipline. At this time what *we can do* far exceeds our ability *to do*. We are underway with no plan for the consequences. At a time when all of our energy needs to go into planning, evaluating, and preparing new approaches, too many are

asleep or fighting change. A few may determine a future that may, or may not, be good for us.

- ❖ The learning ladder in every discipline must be mastered, step-by-step. With readily available information there is a tendency to jump ahead of what we know and can do. We must create effective ways to ensure that every student masters essential information. If that sounds like it takes a school, a desk, and a teacher, then until the 'something else' the *Information Age* provides is implemented, we need those places.
- ❖ With our new tools, the acquisition of knowledge accelerates in ways we are only beginning to understand. The idea of breaking a subject up into 176 - 42 minute doses is artificial and has no foundation in principles of effective learning. Completely new approaches to subject and seat-time are being explored. Real learning takes place in intensive, involvement-based, interactive surges. Time-on-tasks may accelerate and whole courses we once thought of as semester or year-long are mastered in hours, days or weeks. In the 24/7/365 virtual world, learners may take one or any number of courses at a time, according to their readiness and the resources the teacher(s) can put together with them.
- ❖ The student is moved from the old model of 'Sit there. Keep your book open and your mouth shut,' into

interactive multimodal virtual space where his learning requires his full attention as he fights pirates, explores the Philippines, solves math problems that let him enter a world of applications, walks on the surface of each planet in the solar system, follows the magic and mystery of an educational game designed to teach the basics of physics, urban design, power grids, and city planning, moves through the human body in a tiny ship, and walks inside a leaf as a botanist.

- ❖ The teacher must know the child and be able to diagnose and prescribe for each child.¹⁰⁰ Training and education take hold when the information is associated into the ken of the student. It's not what is presented, or what is assumed a student knows because of exposure, but what the student heard and relates to. A teacher must ensure that each child is at the level of instruction and understanding required for mastery. Telling information and testing the student's recall of that information is not enough. It is what takes place inside the mind of the student that is critical to learning.

Learning about each student was difficult if not impossible until now. Utilizing virtual space and programmed avatars, and taking the childcare functions away from educators, a

¹⁰⁰ Reif, Frederick. Applying Cognitive Science To Education. MIT Press. MA. 2008. Teachers must diagnose students' initial understanding of the content at hand.

master teacher will have the tools and the time to know and mentor each child.

- ❖ All students must be in interactive relationships with mentors and instructors. Now, with access to unlimited space and time for instruction, the teacher's role becomes connector, mentor, guide, and evaluator. The teacher sets the parameters within which specific learning takes place. She sets the focus of learning and designs or accesses the resources most applicable to what is being taught. She does that with the goal of making each student a self-directed, interdisciplinary learner. Interactive learning has the added benefit of keeping students engaged.

- ❖ Education is the ability to apply essential skills (the math needed to solve a problem, the knowledge of the Constitution necessary to understand citizenship and how our governments work). Application-directed training and education may require hours of repetition, hours of searching for the right matches and combinations, hours of drilling and practice. Avatars created by the teacher - including some programmed with artificial intelligence (AI) that are rented from avatar suppliers¹⁰¹ - can spend unlimited time with each student until mastery is attained and the learning process is completed.

¹⁰¹ This 'rent-an-avatar' possibility gives us an insight into creation of whole new industries that will require creative thinkers.

- ❖ There will be no place for teachers who stand at the head of the classroom and tell information, assign worksheets, give tests, and babysit. If that is the image of a teacher you are familiar with, imagine a lot of out-of-work people or, the source of supervision and activities staff for the important childcare functions that need to be separate from educational pursuits.

There must be educators who understand the requirement to diagnose and prescribe educational approaches to fit each child. That is the professional responsibility of every teacher from pre-school through graduate school. They have command of their discipline and know how it interweaves with other subjects. They know how to set parameters of subject area learning and how to use evaluation techniques to ensure student mastery. These professionals are motivators, mentors and coaches. They are able to identify resources and help students access information. They are specialists at placing the burden of learning and the application of learned information on the student. If they are skilled story-tellers, then their lectures are used to weave together learned information, to motivate, and to help students mnemonically. In classroom environments, through virtual space, face-to-face, or via avatars, they guide, excite and empower each learner.

Increasingly, as we know more about adverse effects on the brain's development by technology and its positive and negative impacts on certain brain centers, the teacher will have to observe the student and prescribe activities and interactive programs to make certain the student is not damaged.

- ❖ Building warehouses/schools to store kids and keep them under control can no longer be combined with or compete with training and education which does not have to be place-based. Students need meaningful play and leisure time activities that are not under the control of their academic teachers. As long as the basic mode of operation of the adult community is based on the factory system (Mon–Fri 8am–4pm), children need to be kept safe and under control during times the parents are not available. Until we create a new system for taking care of kids - like what we do in the summer - we will need a system in place to take care of children. That cannot be the same system and staff responsible for their epistemic education. We cannot continue to support the *vital lie* that schools are childcare facilities.

Changing place-based education puts fear in the hearts of many. Parents become indignant, “I have to work. Who will take care of my children during the day?” That is a real problem. K-12 schools are functionally babysitters and child care centers. The school day is

geared to the factory system work day and kids must be cared for while parents work. Most parents today go to a place to work, unlike their great-grandparents who probably worked the farm or small town business as a family. As the factory system dies, the family may come back together.

If children have to be warehoused, then exportable models developed by Boys and Girls Clubs and other after-school programs can be used to provide activities and application-phase educational programs that supplement, but do not compete with, training and formal educational programs. Again, programs needed for high school students are not the same as those for elementary school students, although, in current practice they are very similar.

- ❖ As technology speeds ahead – let’s say five years from now - PCs and laptops will be outmoded. Our ‘looking glass’ into the resources of virtual space, virtual worlds, access to friends, teachers, virtual tutors and mentors, will all fit in our pocket, on our wrist, in a headband, or projected onto a contact lens. We may carry a notebook, but it will be unlike anything currently on the market. For one thing, it is a translator that lets us talk with anyone on the planet, in their language. It is a complete *Mirror World* map system for the planet and the universe. It is entertainment. It can generate a holographic friend and be

used to contact family who are probably monitoring us as we go about the day. It supplements our memory and helps with complex and obscure calculations. Science fiction writers would describe our future selves as super beings in touch with the universe and capable of creating through combinations of resources and imagination. If the 'you' of ten years from now sat next to you today, you might wonder if you had humanity in common.

- ❖ Leading by factual information, educators must preserve essential parts of the curriculum. When there is data to support the inclusion of programs, and hard evidence that those programs are necessary, elimination of them is not acceptable. A current example is information gathered over 25 years documenting the positive effects of quality early- childhood education. At a time when almost every school district in America is cutting support for early childhood education, consistent information is available that these programs are essential.¹⁰² At the same time, expensive programs such as busing students are given priority, and clueless, talking-point politicians are coerced into signing a pledge that they will not raise taxes no matter the cost.

¹⁰²Science Daily (June 10, 2011) — High-quality early education has a strong, positive impact well into adulthood according to research led by Arthur Reynolds, co-director of the Human Capital Research Collaborative and professor of child development, and Judy Temple, a professor in the Humphrey School of Public Affairs at the University of Minnesota. The study is the longest follow-up ever of an established large-scale early childhood program.

- ❖ Our present curricula teaches attitudes and social behavior appropriate to the workplace and labor management system. Maybe parts of this training should be preserved as a base for education in the *Information Age*. For example, cooperation, conformity, compliance, punctuality, neatness, task orientation, care of property, and allegiance to a team. These are core values in society now and probably will remain necessary in the future.
- ❖ Our schools are supposed to integrate youth into our economic system. Yes, *but*, the system is undergoing radical change and redefinition. Our factory system for manufacturing and production is shrinking and redefining itself. Unemployment is a major problem. Leaders speak of service jobs and retraining for new jobs. Sadly, they are at a loss when asked to identify the jobs we are supposed to train for. The skills a child must be developing now to be able to function in future 'jobs' are mental skills based upon interdisciplinary comprehensive education, self-directed learning, flexibility, creativity, and the ability to apply factual, learned information to new challenges.
- ❖ We must consider a society that is not organized around work and the production of things. We may be moving toward a society where the essentials are provided and not purchased. We assume that a system that forces people to work or starve follows some natural order.

When the first 'leaders' managed to stay out of the fields and got others to work for them, this assumption became relative. In the Industrial Age, 'leaders' perfected a system of captive labor. Workers were forced to work in their factories. In exchange, their 'leaders' provided minimal basic needs.

If, in our evolving technological society, people don't go to work in traditional ways to earn money to buy food, clothing, and shelter, what do they do? Is it possible that productive activities will replace place-based, product producing work? We need to find out. Two things are certain: Hunger, fear, insecurity and confusion equal futility, not motivation; and, our educational systems must prepare students for a future that is not a replication of our past.

- ❖ Until the tidal wave of the *Information Age* broke over us about a decade ago, dominating groups controlled access to knowledge and the standards by which knowledge is judged to be valuable and legitimate. Males have dominated, as has Western (European - American) concepts of the value of women and minorities. Beliefs (*vital lies*) about sex, age, race, and economic condition have controlled our institutions. In the last century programs were developed to recognize women and minorities and treat them equitably at school and in the workplace. Now, our higher educational institutions have

more female students and minorities while male undergraduate enrollment is down.

One may conclude that when schools are geared to male success, men succeed. When schools are redefined to recognize female needs and success, women succeed. We know the sexes develop and mature at different chronological times. We know that there is nothing as unequal as the equal treatment of un-equals. It is now possible to develop gender-neutral curriculum that does not force un-equals to compete. We can provide developmentally relative curricula for everyone regardless of their gender. It must be done ASAP.

- ❖ The idea that the school needs to keep children socio-economically and emotionally dependent is widely accepted. Our systems intentionally deprive students of their power to act and solve problems; to be part of solutions. The system is designed to keep students little and dependent when it should be creating self-directed learners with power over their lives. What is happening is that children - those in-between the state of childhood and adulthood - can now get information that causes them to question their keepers and what is being done to and for them. We must design systems that will keep them safe without squelching their inner power and initiative. We must implement schools and programs that adjust to

their level of maturity, nurture them, empower them and let them grow.

Kids with adult knowledge but a lack of maturity will be a problem because in this *Information Age* there is no age and maturity related ID to get in the door. There must be control systems (warehousing and childcare systems), and epistemic systems in the cognitive domain. Requiring professional educators, whose unique skills and whole attention must be focused on individuals and teaching, to be a policing force for dependent children defeats the training and educational necessities of education. We must remember that the way schools are currently organized is not based on educational imperatives. Rather, schools evolved under the impact of social and political pressures. In the *Information Age*, there are new social and political forces and they will reorganize our schools.

- ❖ Large, complex, multi-level organizations run by full-time 'professionals' have been established to ensure that the current patterns of organization and control are in place and maintained. These range from state departments to accrediting agencies. Like all bureaucracies, a great deal of their energy is spent ensuring individual powers and security. As self-perpetuating institutions they are organized so that they are not accountable. They become more important than those they were created to serve. A

hierarchical top-down chart would show that the two least important positions at the bottom of the chart are teachers and students. We may assume that in the *Information Age*, as options provided for teachers and students increase, so will the bureaucracies' resistance to anything they perceive as a threat to their positions and power.

If these bureaucracies don't go through a redefinition process and guide the New Education; if they don't put children, teachers and the nation's future first, they must be by-passed. They may recoil and try to lock down the educational system as-is in the hope of self-preservation. They will ultimately fail, but not until they have done great damage. Even the strongest and most entrenched resistance will not hold out forever. The power and accessibility of technology and knowledge will break any dam.

- ❖ A terrible truth we must deal with is the failure of our industrial-age education system to prepare millions of Americans to survive in our complex global economic and social systems. Our schools have failed to help these citizens make a contribution to themselves, their families, and society. These deprived masses are desperately trying to survive. Rather than provide the training and education they need, we have developed complex welfare and prison systems. We have become our brother's keeper, instead of

our brother's brother. These damaged individuals are unable to function for a variety of reasons, but the main one is a lack of training and education. Most lack an understanding of how things work, especially if they don't have effective role models to learn from, to guide them, and to mentor them.

- ❖ As we depart from the needs of the industrial age, we have fewer and fewer places for low wage workers or grunt laborers. The precept that an individual who does not have the mental or physical capacity to participate fully, is to be used for grunt labor, is repugnant. There is no rationale we can use to justify degrading damaged people instead of helping them participate in the American dream.

The cost of maintaining these damaged and deprived citizens is far in excess of the cost of providing effective educational programs. The result of not doing enough to help these people get the education necessary to share in the American dream is another form of national suicide.

Is there any hope for them and their children? Yes. We now have access to resources that do not require the continuation of past systems or large amounts of capital dollars. Through technology in this electronic age, we can write the code for interactive, participatory programs that

train and educate these citizens. We can prepare them so they can contribute and participate in an evolving society that does not define demeaning physical labor or mindless work for inadequate pay as the means to get food, clothing, shelter, medical care, mentoring, and education. Giving them access to quality education and the future does not make them lazy, as too many believe. Those of us who are successful were not ruined because we had guidance, help, security, medical care, our basic needs met, education, and financial support.

- ❖ One of the major challenges in this time of change is for educators to devise ways of helping people master essential skills, understand how things work, and get what they need. The idea of using technology to do this is facilitated by the wide use of cell phones which can be portals to information. Smart phones and tablets are evolving into great educational tools. Interactive games, books, and programs developed by educators with the help of code writers, can bring disadvantaged people to a place where they can share in the dream. We are seeing TV programs and commercials that Americanize, and that familiarize us with technological ‘toys’ and options that only a few years ago were first imagined through Star Trek and other science fiction.

In many ways, the disadvantaged, like the majority of us, are using advanced technology. They are learning to

navigate and participate. They are primed for educational programs using virtual resources and artificial intelligence in 'schools' that help them get what they need.¹⁰³ All that is lacking is a positive vision of our future bolstered by educators who take on the tasks and create the educational programs necessary to bring these citizens into the fold. One would expect that our top educators and the educational leaders at our universities are already working on ways to educate those once thought unreachable.

- ❖ What will the ability to contribute to ourselves and our country be like in the future? Is there a place in our evolving economic system for any of us? As an affirmative 'yes', imagine what will happen when the best code writers from the gaming community pair with master educators and create new ways for human beings to acquire and apply knowledge in engaging and immersive ways.

In 1969-70 I spent a year visiting and learning about schools in 22 different countries across Asia and Europe. I was searching for educational programs that

¹⁰³The mental image of school, is place-based. Change that image. To serve these citizens the educational programs must be accessible from where they are 24/7/365, and they must be free of production controls as developed for the industrial age. The necessary curricula is filled with exciting and motivating adventures that are interactive – that they participate in – and that are meaningful to them and applicable to their reality.

worked. Sadly, I found very few. I was visiting a kibbutz in Israel, sitting in the back of a classroom. The teacher was moving around the room, bending toward each student and examining the student's work. That was unusual - for a teacher to have contact with students was not acceptable in most of the countries I visited – so I paid attention. What I heard that teacher say was so completely new to me, an experienced educator who had been in hundreds of classrooms, that it changed my thinking forever. His words still ring true and guide my thinking as I examine future ways to deal with our massive numbers of educationally challenged citizens. As he bent over so he could speak quietly to the child, I heard him urge the student to think, to focus. That's when he said, "Come on, come on Son, we need you. Our country needs you."

Has anyone ever said that to you?

Ch. 14: What Must Happen?

Schools that work prepare students for their future where they will need to be self-directed learners with sound interdisciplinary foundations. To work and make a contribution to themselves and the society they will need the technological skills necessary to navigate through vast sources of information, discern what is accurate, and apply their skills to solving worthwhile problems. John Dewey not only introduced the world to Experience and Education, but also to the concept that education must result in the ability of the learner to make a contribution to himself and to society¹⁰⁴.

We must ensure the delivery of the foundations/training a learner receives throughout their education. Mastery of the essential skills cannot be eliminated, watered-down, or skewed to warp and weaken a learner's foundation as is happening as a result of the No Child Left Behind federal mandate. Students

¹⁰⁴Dewey, John. A major figure in American intellectual history is considered to be one of the few Americans of the twentieth century who can be acknowledged on a world scale as a spokesman for mankind. Dewey's areas of work included philosophy, psychology, education, politics, and social thought. Dewey described his life goal as the quest to obtain "a moderately clear and distinct idea of what the problems are that underlie the difficulties and evils which we experience in fact; that is to say, in practical life."

without mastery of foundation skills in multiple disciplines will not be in demand in the workplaces of the future.

We must preserve educational programs that require the mastery of civics and government. We must require a comprehensive understanding of American government and the Constitution. It is the best way to preserve the American Dream. At the present time fewer and fewer school boards require the effective teaching of civics and government (now a majority of high schools). The teaching of a citizen's responsibilities and the knowledge of how we are governed is not patriotism or flag-waving, or attached to any political ideology. It is essential if we are to live free.

We must preserve our commitment to comprehensive education. Every child needs an introduction to at least ten ways of looking at the world. The achievement of students with high aptitudes in math, science, music, and the arts, is limited if they are removed from comprehensive programs. If partial schools - charter or magnet schools - provide special emphasis geared only to student strengths, they cannot be allowed to rob their students of full exposure to essential, comprehensive and interdisciplinary knowledge and skills.

From what we know of the human brain and how it develops, there are definite windows of opportunity for learning. Research has shown that very young children acquire spoken language skills more easily. There are stages when certain skills develop. Decades ago, the work of Piaget defining stages of

cognitive development in children was instrumental in identifying these stages.¹⁰⁵

An interdisciplinary curricula must be in place to help the child develop these mental abilities, while the brain is in that development stage. Not before, when the child is not ready, or after, when the mind is less susceptible. Evidence is clear that deprivation of appropriate development activities can damage a human being for life. And now, in addition, we must ensure that technology does not deprive susceptible minds of necessary development.

We must preserve the idea that parents may enroll their children in programs provided by their religion. These are not state sponsored and supported programs, but rather a continuation or a redesign of after-school, Saturday or Sunday school programs. Religious training is not a function of the state. Nor is it to be controlled by purse strings attached to the government.

Key to understanding what must change is knowing the grade level we are evaluating. Except for introducing the safe and correct use of technology, elementary schools that have not been tampered with (see Chapter 9) will need the least modification as most are already child-centered and focused on training and Americanization in spite of teacher shortages, lack of parent support, and funding cuts. Elementary students are increasingly computer literate and skills for learning via technological options must be added as part of the curriculum.

¹⁰⁵ Notes from my visit to the Piaget Institute. Switzerland, 1970.

Secondary schools and universities require the most study and modification as the changes necessary for education in virtual space and the availability of unlimited, unfiltered information, presents new challenges. Higher education, which is beginning to use a world knowledge base, requires almost complete re-thinking and change because it is becoming the least place-based. Campus life has many benefits and I believe it is a gift we can give young minds, but learning is not confined to a campus.

Place-Based Instruction and Resources In Virtual Space

Place-based education has been the dominant model in education for centuries. Students come to a specific school complex to receive their education. The physical plant is fundamental to the way teaching and learning take place. Most often, it is a facility based on the motel model with isolated classrooms along corridors connected to a central office and, perhaps a cafeteria, large meeting area, library and gym. Students are under the control of an authority for part of a day, five days each week, for approximately 176 days each school year. Each classroom is under the control of a teacher. Each teacher controls what is taught during the day, or in middle and high schools, a class period of approximately 42 minutes. Each teacher provides the main office with attendance data, lesson plans, administrative paper work, and student progress reports. The main office is also the discipline center for the complex. Children are constantly passing through the system. The place and its operating system become important, not the children.

Moving education from a place-based system works if the student is ready and the parent(s), or some other supervision system is in charge when a teacher cannot supervise. It will be necessary to place a foot in both worlds until both can be shifted to the new educational methodologies we design.

As the development of virtual world environments continues, the educational system will break through existing conceptions about instructional delivery systems. Interactive learning¹⁰⁶ will take place in many environments, not one classroom. Practices which constrain growth and development like placing every student at a desk, in a room, doing the same things at the same time, will no longer be tolerated. Virtual learning environments offer the opportunity to group students by achievement levels and comprehension readiness, not chronological age. Students who gain mastery quickly are not held back. Students who need more time have it. Multiple teachers are available as avatars, on-line, or in person. The days of one-way 'communication' between a teacher and passive students are past.

The concept of school boundaries changes. School is anywhere the student can access instructors, peers, and the information they are required to master. Lecture halls and traditional classrooms are replaced/supplemented by

¹⁰⁶Interactive learning - involves communication or collaboration between people or things. It includes interactions between people, teachers and students, students and virtual resources, interaction with artificial intelligence programs, computers, games, and programs.

presentation areas in virtual space. Bricks and mortar classrooms may not be needed if the meetings can be more effective elsewhere. Non-place-based meeting and instruction areas can be operational and utilized 24/7/365. Virtual space programs can be utilized for instruction, assembling groups of learners and teachers, presenting in-depth information from many sources, mastery evaluation, and re-teaching. Immersive multiplayer gaming environments can be used to engage students in new and exciting ways. As gaming code is applied to educational programs, a whole new interactive curricula develops.

In virtual space, avatars can teach and review, evaluate, take attendance, do administrative requirements, and send up-to-date reports to parents and students. This frees teachers to focus on each child.

Misunderstandings used to perpetuate the current system usually revolve around the assertion that by utilizing virtual space, the interpersonal skills of students will be stunted. The opposite is true with the exception of a small sector of the population who may try to spend an inordinate amount of time in these 'worlds'. The problems of troubled children should not be used to deny other children access. There will always be children who have psychological and social problems that keep them from integrating well with other students. There will be students who use immersion to hide from interactive, interpersonal relationships. They must be identified and involved in a range of physical activities and programs that address the interpersonal problems associated with their behaviors. Overuse of technology

is a symptom of a deeper problem that would manifest in a different way if the technology was not available.

The elimination of many place-based programs is necessary. Some changes are happening, but too slowly to keep up with the demands learners have. This lag is impeding the ability of students to fully engage in their learning. Many self-directed learners are leaving school and seeking knowledge on their own. Bill Gates, Steve Jobs, and a large portion of Silicon Valley's creative leaders are examples of this migration away from an antiquated system.

Student Management And Instruction

In our present system, students are grouped by age. Classes are taught by age-level equivalent presentations and materials. Male and female students of the same age are forced to compete, to their mutual detriment. Students are moved forward through the system based upon time in class/classes and ineffective evaluation. Subject matter is pre-determined for each grade level and discipline. Tests based on the recall of identified 'taught' facts are used to determine the student's academic grade and the effectiveness of the teacher and the school. Students are grouped together in a class where information is adjusted based upon ability grouping as determined by testing and teacher observations. Cheating and the 'gaming of the system' is prolific and usually accepted. Students receive information that is canned, sanitized, and simplified for ease of presentation and evaluation. Little or no attempt is made to ensure the information

presented is associated into the ken (range of understanding) of the student.

Schools are designed for passive-adaptive students. Male energy and problems with students who do not conform results in punishment, cowing, and pushing out when chronological age allows it. Too often students are discouraged from progressing faster than others in the class, or than the teacher's ability or lesson plans allow, leading to boredom and disengagement or disruptive behavior.

There will be a transition period as students who have been taught to be passive and not have power over their lives and learning, adjust to this new age and their new responsibilities. They were conditioned as factory workers obeying their boss, and not as creative thinkers responsible for their own lives. They have been taught that learning is their ability to memorize and later recall what the teacher gave them.

The management of educational institutions changes from one of conforming students and teachers so the learners are safe and the administration has fewer problems, to management plans that focus on supporting self-directed educators and creating self-directed learners.

Jim Collins, author of Good To Great, makes the point that:

... when you have disciplined people, you don't need a hierarchy. When you have disciplined thought, you don't need a bureaucracy. When you have

*disciplined action, you don't need excessive controls. When you combine discipline with an ethic of entrepreneurship, you get the magical alchemy of great performance.*¹⁰⁷

Although Collins is writing about corporate models, his information can be applied to education. Of course, to achieve this discipline, strong professional educators, not politicians and industrialists, must lead.

In the schools we need, students are placed in interactive programs designed to help them learn self-control and self-discipline. Learning becomes fully interactive, multimodal, and educational games oriented. Curriculum foundations are based on essential skills. The application and mastery of skills is measured by involvement activities where the student must apply learned information to solve problems and advance up the mastery ladder.

Consider schools where seat time and course length are no longer measures of student achievement, e.g., "You have 35 minutes to answer all the questions on the test," or "We've got to end this unit to keep on schedule and get on to the next one," Accomplishment is a measurement of learning and is not linked to time or speed of progress. Realistic parameters are set based on the student's needs. Reasonable expectations for each learner are determined by the instructors, based on extensive observations and input from others.

¹⁰⁷ Collins, Jim. Good To Great: Why Some Companies Make The Leap And Others Don't. Harper Collins. NY.2001.

We must have schools where Individual learning is not geared to classmates, a class, or a block of time. Where teaching and re-teaching is required until the student demonstrates the ability to apply what is learned. Imagine programmed avatars driven by artificial intelligence working with students to drill, evaluate, re-teach, and introduce information. They may also provide current, in-depth, and real-time reports/feedback that the teacher uses to ensure student progress through sequential learning modules, mastery checklists, and portfolios that follow the student through the system. These demonstrations of mastery are always available for review by parents and professionals, and ensure that the student is not lost, or that their mastery of key concepts is not rote.

We must redefine the role of Principals as educational leaders (master teachers). Educational leaders must not be paper pushers, budget thumpers, and disciplinarians. Principal teachers empower the professional staff to work with students to ensure they gain power over their lives and learning.

Non-educators must not limit legitimate educational activities based on budgets or logistics. For example, I was explaining the use of virtual space to a high school administrator. He let out a loud sigh of relief. "Thank God! When that happens I won't have to fight my teachers over who will pay for busses for field trips." Support services have budget and logistics limitations, but they are dealt with based upon educational program priorities.

The administration must adapt to student education and growth by supporting the process, not the place. New safety,

security and support systems will develop that supervise learners wherever they are in normal or virtual space.

In the past, educational time (time in school) was defined around vacation times and holidays. The educational 'year' initially allowed children to assist on the family farm during the planting, growing, and harvesting seasons. That is why we have spring, summer, and fall vacations built into the calendar.

We have different needs and possibilities today. 'School' happens all year, or any part of a year, as determined by the learner, their family, and their tutors and mentors. Vacation time is determined by learning needs and family needs, not agricultural or religious calendars.

Elementary schools are also childcare facilities. They need to be because the children are just learning to care for themselves and take charge of their behavior. Some children will remain very dependent and need time to mature (Some may need time beyond elementary school). Others may begin to expand their learning opportunities and environments in schools that encourage them.

After elementary school, childcare and babysitting functions must be gradually separated from education. That requires that parental responsibilities must be defined and enforced.

New programs must be developed to serve all children through age 17. The practice of pushing-out students who don't fit the factory model must stop. New programs will be developed to address their needs.

The Role of the Teacher

Currently, the teacher closes the classroom door and becomes the sole authority. The teacher emphasizes parts of the subject matter covered on the state exam. Teaching success is based on the student's capacity to score well on standardized tests. The ability of teachers to adapt subject matter to each student's level of development is limited. Teachers can penalize any student who questions his/her interpretation of the subject matter. A teacher controls information entering the class. Teachers can structure time in a classroom to suit their needs. The teacher is only required to be available to students during certain hours. A teacher cannot assemble an interdisciplinary team to work for/with students.

The teacher cannot expect to be fairly evaluated and given help by the administration. A teacher may withhold information about student achievement if it makes the school look bad. The teacher is considered labor hired to do a specific job and obey management. A teacher may teach a subject with little or no background or training, and hopefully, with a transcript that shows they took that subject in college. The teacher is the teller of knowledge as they understand it. Teachers are responsible for duties related to childcare and supervision, attendance, and administrative work that take time away from students and instruction.

The role of the teacher will change. The integrated use of technology will allow teachers to become facilitators and

coordinators of information (foundation/trainers have a different role). 'One-way' communication ends and becomes interactive. Teachers connect students to world resources. Teachers set the parameters of learning for specific levels (courses and units within courses). Teachers stay focused on the individual growth and development of each learner identified (assigned) to the group or class within their responsibility. The role of teacher changes so that the student is working up a sweat as the learning engine, not the teacher as the teller of information. Emphasis is on how to think, solve problems, evaluate information, and combine insights from multi-disciplinary sources while using creative approaches to problem-solving.

We need teachers who learn about each student and provide the desired outcomes for each individual. Teachers who utilize virtual space as an extension of the classroom and as a way to work with students individually and in groups. Teachers who extend their accessibility through the use of avatars. Teachers who know the essential skills necessary for mastery and the applications of taught material, and train individuals accordingly.

Teachers needed today, evaluate student mastery of identified data by observing how they are able to turn the concept in their head and apply it to other situations - for example, teaching it to another. Teachers who work as part of interdisciplinary teams that may or may not be place-based. Teachers who break out of the time-blocked system and use time as necessary to meet goals.

In 21st Century schools, time-on-task is determined by the teacher and the student, not a set schedule. Teachers build their

courses and instruction around the Learning Path: Introduction, Association, Application, Internalization and Contribution.¹⁰⁸

We must identify teachers who are highly skilled professionals. Educators whose time is focused on students and instructional coordination. Their time is not used for patrolling, policing, or administrative tasks best done by support personnel, mainly in virtual space. Because all teaching programs become individualized and interactive, course length, within realistic parameters, is determined by the teacher to address student needs and learning styles.

The nature of evaluation changes. Teachers do not use tests to punish or motivate students, or to impress outside evaluators. Teachers use multiple modes of evaluation (summative and formative) to determine the educational focus - the needs - of each student. Teachers become mentors who spend all of their time working with students. Teaching emphasis is on student mastery of basic skills necessary to function in the course and the application of learned data, not how to memorize information to pass a test.

Teachers must understand school operations including planning and fiscal management. They cannot withdraw into their classroom and leave the decisions to others. They must reach out to the communities they serve.

The Role Of Parents

¹⁰⁸Research by the author in the early 1970s into how learning takes place. SEE: Crow Canyon. Pioneering Education and Archaeology on the Southwestern Colorado Frontier. 2nd Edition. Author House. 2009.

Currently, some elementary and almost all secondary school parents turn their children over to the 'school' and receive information about student needs and progress through report cards, parent-teacher conferences, or notes sent home. Every reasonable attempt is made to keep parents out of the way of the 'experts.' Parent information about their child is discounted, if sought. The teacher's observations about each child are not readily available to parents or to the child's other teachers. Parents who want to be involved in their child's education are given derogatory names (e.g. helicopter parents). Parents are not responsible for the actions of their child. The school cannot require parent participation in the educational process designed for their child. Parents are not given help with parenting or required to assume responsibility for their child's behavior, learning readiness, and support. In the current system, parents are for bake sales and buying tickets to events.

Perhaps one of the most significant issues modern society has to address is the idea of holding parents responsible for their children.

What must change: It is not the job of the educational program to replace the parent or to assume parenting and child-rearing responsibilities. It is the parent's responsibility to ensure attendance, acceptable behavior, support of the academic programs, and to access the up-to-date status of their children in 'classes'. Parents are responsible for feeding and clothing their children. Parents who do not support their children's needs are

required to attend programs that teach parenting. Parents are responsible for childcare which is separate from schooling, and enrolling their children in supervised recreational and activities programs. Where parent(s) are unable to care for their children, appropriate agencies, not teachers, not the school, will take charge.

As stated, the idea that a parent can turn a child over to the state and have no role or responsibility is without merit. The definition of *in loco parentis*¹⁰⁹ must be redefined to allow for student supervision and care in learning environments outside of the school. In this transition time, we will have to provide ways of keeping children safe. It will take time for the culture of work to change.

The Role Of The School Administrator

In the present, schools are factories turning out conformed human beings. The administrators are floor managers or representatives of management, with one 'big boss' in charge. School administrators are usually educators given jobs related to running a business. Because purse strings are used to control the factory, learning issues are not given an advantage over finances, building maintenance, federal, state, and district paperwork, discipline, evaluation, or personnel. The factory system only works when everyone is under control and engaged in predictable (budget-enabled) activities.

¹⁰⁹*In loco parentis*. Latin for "in place of a parent." A person or institution that assumes parental rights and duties for a minor.

There is little time for an educational leader (Principal Teacher), a Master Teacher, to work with and help the professional teaching staff carry out its mission. Evaluation of the professional staff is constrained due to time, lack of expertise, and the failure to go through due process when correcting behavior. Rather than create an administrative system that supports the education of learners, the system created is one of eclectic duties in catch-all systems of anything but educational leadership. School administration is often a miserable job.

To correct administrative problems, the job responsibilities of school administrators must become differentiated. The same person cannot be responsible for the educational program and support services. The primary need is for supervision and coordination of the professional staff who deliver services to learners. This requires an educational leader (principal teacher) with the experience and interdisciplinary knowledge to support the academic program, manage personnel (hiring, firing, evaluating), treat teachers as professionals (not children and laborers), and identify the capital and operational needs of the professional staff.

Like any manager, the Principal (master teacher) must also work with support staff and within budget limitations to carefully plan the allocation of resources to support the academic program. Without differentiated roles, and clearly defined areas of responsibilities between the academic and the support staff, the educational leader will not have time to do what must be done to ensure the delivery of quality education.

The support staff, working with the educational leader, ensures that federal, state, and fiscal requirements are met. They are responsible for the operation and maintenance of facilities and equipment. Because the business side of school administration varies little from district-to-district many parts of it do not have to be replicated in each school. As place-based education is transformed by the increased use of virtual space, the responsibilities of support staff will change dramatically.

Envision a management system based upon a team approach which includes the three critical areas of decision-making responsibility necessary for the delivery of services to children. The team consists of a master educator, a financial manager, and a person charged with monitoring and accountability. The reporting structure provides direct representation and balanced input to the School Board and to the public. All decisions are considered in light of how they affect students, not how they appease political forces.

Ch. 15 Conclusion

Never in our history has there been such a major divergence between how generations learn.

After striving to understand our educational system for 50 years, it was no fun to be told by my twenties-something sons, both millennials and digitally-competent interactive travelers in virtual space, that what I knew and had to offer was vital, but it was based in last century's knowledge - only parts were applicable now.

Great! I would love to ignore the messengers and pretend nothing has changed. I could enter the end place of dinosaurs and die with my peers. Or, I can help – WE can help. We can take what checks out as necessary and effective from the past and assure that learning in the 21st Century is based on sound foundations and the needs of individuals and society. We can work with the new leaders and make certain what is created delivers mastery of foundation skills in multiple disciplines and that the recipients are capable of turning information in their heads, determining its validity, and applying it to new situations. If we stay in the game, we must help create a new operating system where each student develops a '*crap detector*' to sort through massive amounts of information to evaluate its accuracy.

Change or get the hell out of the way! If you have difficulty, sit down with a young traveler in virtual worlds accessing limitless resources and start re-educating yourself. You may be 25 or 75, but you can do it. You'll soon find that some of the basic concepts identified in past centuries and essential for every individual and every citizen, have not changed. Nor will they be incorporated in the new paradigm unless ***you explain them, show why they are necessary, and show how to apply them.***

It's simple. It is about identifying things that do not work or hold true – the *vital lies* we have come to believe. It is about bringing forward things that work and should be continued. We must do that as we select the foundation requirements for evolving education.

I've taught, mentored, or known enough graduate students – many experienced teachers and administrators who have been in the profession for years – who received their degrees but never read Dewey, Glasser, Montessori, Gardner,¹¹⁰ Goodlad¹¹¹, Bruner¹¹² or a host of others not required in their watered-down education classes.

¹¹⁰Gardner, Howard Earl (1943-) His work around multiple intelligences has had a profound impact on thinking and practice in education. He views intelligence as 'the capacity to solve problems or to fashion products that are valued in one or more cultural setting' (Gardner & Hatch, 1989).

¹¹¹Goodlad, John I. is an educational researcher and theorist who published influential models for renewing schools and teacher education. Goodlad's book, In Praise of Education (1997), defines education as a fundamental right in democratic societies, essential to developing individual and collective democratic intelligence. Goodlad has designed and promoted several educational reform programs, and has conducted major studies of educational change. Books he has authored or co-authored include The Moral

They are unaware that some of our best educational thinkers proposed vital and necessary solutions to educational problems decades ago. A hero of mine, William Glasser, M.D., in his writing in the 1980s identified problems and proposed solutions. Unfortunately, at that time, the structures of schools could not be changed to incorporate what students needed. Consider these excerpts from his 1986 book, Control Theory In The Classroom.¹¹³

The traditional class fails to get many students involved because few students believe that they have access to power in it.

... the teachers acted as modern managers in that they structured the assignment so that it made good sense for students to work hard. They coached, facilitated, answered questions and provided materials as needed, but they did not present the material as they do in traditional

Dimensions of Teaching, Places Where Teachers Are Taught, Teachers For Our Nation's Schools, and Educational Renewal: Better Teachers, Better Schools.

¹¹²Bruner, Jerome S. The Process of Education. Vintage Books/Harvard University Press. 1960. An American psychologist who has contributed to cognitive psychology and cognitive learning theory in educational psychology, as well as to history and to the general philosophy of education.

¹¹³Glasser, William. M.D. Control Theory In The Classroom, Harper and Row. NY. 1986. P. 116. His other essential books: The Quality School, The Quality Teacher, The Schools Our Children Deserve, Choice Theory in the Classroom.

classes in the hope that students would learn enough to pass the test.

This diverse group of thinkers was unable to break through the antiquated structures in place then, but not now. In the *Interactive Age*, the relevant and applicable parts of their work can guide us. The necessary changes and approaches they identified give us guidelines for today's learners. Students empowered by the *Information Age* and facilitated by the *Interactive Age* are a strong force for change. The new role of the teachers and the structures needed in our schools today has already been, to a large extent, defined.

In fact, many school districts were in the process of improving schools, and doing remarkable well, when the negative barrages of misinformation from the school choice pirates discredited them. Many whole schools were destroyed and their teachers discredited in spite of the fact that their accomplishments in many disciplines – and their test scores – were higher than those of the school choice schools.

These great thinkers never imagined the resources now available to educators, nor could they have imagined virtual avatars, the almost unlimited use of time and space beyond place, and world-wide access to information. What they address are the core issues for effective learning.

There are many other pivotal works that those interested in America's future and education should be familiar with. One of the latest was written by Diane Ravitch, an educational leader who understands American education. As assistant secretary of

education, she came to understand that the No Child Left Behind mandate for standardized testing was “...part of the sickness of America.” In 2010, with the release of Ravitch’s latest book, she took the lead as an educator who stood against the massed powers of the ideologically misdirected. She has given us a well-documented critique of current educational reform. Her work is a must read for everyone interested in our schools and the future of America.¹¹⁴

As the manuscript for *Vital Lies* (1st edition) was in final edit, I read about Ravitch’s latest work in *Miller-McCune* magazine. In January 2012, I purchased a download of the November 2011 edition and read: *The Death and Life of the Great American School System: How Testing and Choice are Undermining Education*. I had discovered the most important educator in America.

In 2013 Diane published the greatest insight into the Reform movement available. *Reign of Error: The Hoax of the Privatization Movement and the Danger to America’s Public Schools*.¹¹⁵

If you are a parent, educator, politician or corporate leader who reads books that have information that may be against what you have been told is true, read her books. Understand the massive damage done to tens of thousands of children, to teachers, the teaching profession, and to America.

¹¹⁴Ravitch, Diane. *The Death and Life of the Great American School System: How Testing and Choice are Undermining Education*. Basic Books. NY. 2010 (Updated November 2011).

¹¹⁵ Ravitch, Diane. *Reign of Error: The Hoax of the Privatization Movement and the Danger to America’s Public Schools*. NY. Alfred Knopf. 2013

Over twenty million Americans have followed Diane Ravitch on the blog site. <http://dianeravitch.net> She shares information and articles/blogs by some of our country's greatest education leaders.

Those who didn't want to be confused by facts in the past, must now try to repair the damage they have done to our educational system. Men like George W. Bush and even Bill Gates will have to find ways of living with the shame of the damage they have done to American education. The Gates Foundation is pouring money into partial schools because their solutions address problems and systems that were incorrectly defined. Even the very best of intentions must be based on a correct reading of the problem, not a buy-in to a false school choice ideology.

Tomas Friedman and co-author Michael Mandelbaum, recently published, That Used To Be Us,¹¹⁶ which contains information about educational leaders who are attempting to bandage the existing system by restating incomplete observations and solutions introduced and blocked since at least the 1960s. They are expecting different results by attempting once again to make subtle changes to an operating system that belongs to a different age. Like so many, they have not yet come to the realization that our present ways of educating must evolve so the digitally-empowered living in our *Information* and *Interactive Age*, can succeed.

¹¹⁶Friedman, Thomas and Mandelbaum, Michael. That Used To Be Us. Farrar, Straus and Giroux. NY. August, 2011.

Most educational leaders and thinkers have not adapted to changes in interactive, global and learner-powered systems which utilize information and teaching resources unknown a decade ago. Some of them have bought-in-to the destructive school choice model. We need to grow our whole schools and create programs and processes for the 21st Century. We do not need bandages for industrial-age schools.

We are beginning to hear from educational leaders who cut through to the facts, sift out the essential elements of quality education, and utilize interactive virtual world educational resources. What is needed is for our leading thinkers, Friedman, Reich and others, to apply the same evaluative approaches they use to communicate necessary changes in our social policy and economy, to education.

The changes required may far outweigh our culture's ability to grow and adjust to them. A study of history indicates that the seeds of each civilization's destruction are present within it. As the civilization grows and establishes itself, these seeds of destruction grow. When the limited cultural and social development of the civilization cannot deal with new concepts and ways of operating, the civilization declines. I get an icy feeling that ours is a culture at this critical stage.¹¹⁷ Can it change? Is

¹¹⁷Excerpts from columnist Joel Achenbach May 14, 2011 article in *Slate* as found in *This Week, Viewpoint*. "This will be the century of disasters ... natural disasters and technological crisis and unholy combinations of the two. ... We have built vast networks of technology. We have created systems that, in general, work very well, but are still vulnerable to catastrophic failures. It is harder and harder for any one person, institution, or agency to perceive all the interconnected elements of the technological society. Failures can cascade.

there flexibility that can overcome *Vital Lies*, entrenched and established ideas and habits, and unproven ideologies exported from corporate business practices? Is it possible that this new age will create a crisis that causes us to unite and implement deep lasting change?

I chat with my millennial sons to vent my frustration. My digitally literate children will venture farther into these new resources than I ever will. They, like their peer equals who have also explored these other worlds and options, course with energy, idealism and the belief that we can, as a country and as a world, grow our societies and cultures into new forms that provide the umbrella for life, liberty and the pursuit of happiness. I believe they will not fail.

The reality we must deal with is that this change is happening. It is a tidal wave and we are in its shadow. This is real. We may think it is wrong or confusing or something that has come upon us too fast for us to adjust to. It may be damned inconvenient, but the reality is that we don't have the option of evolving slowly.

Whatever our deepest fears conclude, the fact that the new ages are here now and that we must adapt to a new reality, is not debatable. Significant parts of our educational system no longer work. We must modify our delivery systems or enter a dark age.

There are unseen weak points in the network. Small failures can have broad consequences.”

Change brings good and bad. Educational systems must become responsive to information that tells us fewer and fewer students are reading and make the necessary adjustments in what is taught. Information about the brain and how we learn must be incorporated into our instruction, methodologies and curriculum. In the past it was easy to ignore new research. We no longer have the luxury to stay uninformed and continue on the same path, expecting different results.

In little more than a generation we are seeing a difference in the development of the brains of digital natives, digital immigrants, and those who have not begun to use this technology. We are observing the evolution or demise of whole systems that served us or limited us over hundreds if not thousands of years. We are learning the power of knowledge that is not filtered through some government, religion, or academic ideology designed to inculcate certain ideas rather than educate.

We can see new pathways that provide opportunities to rebuild the family unit, keep our representatives accountable, create new medicines and procedures, and embrace ways of extending the quality of our lives. We are able to create new tools, weapons and all types of energy slaves. We are experiencing the results of world-wide cooperation in the sciences and, hopefully, social and cultural development.

Those whose livelihoods depend on building and maintaining places to house students suddenly find that virtual space can be used in place of bricks and mortar. Students are using virtual campuses that are not limited by the facilities and finances of each school district or state. Taxpayers responsible for

funding and building schools may get some relief, but if we continue to replicate thousands of little, partial educational systems, school boards, administrative overhead, libraries and ... we will alienate taxpayers who will turn against the whole system.

Well-organized minorities which too often defeat the will of the majority, may now be exposed. In addition the condition of being uneducated, unaware, and uninformed caused by manipulated educational systems can be replaced by quality education that is ensured by a federal system of basic requirements. Political movements that depend on an uneducated or poorly educated populace can be exposed and defeated.

Many nations are experiencing this enlightenment and the power of the interactive nature of this resource: Technology. America is not immune from this exposure. We must enter an age of responsibility and accountability.

No change comes without the potential to damage people. If we ignore, alter, or erase the essential nature of human beings and do not preserve the supportive elements we need to learn, adapt, discipline our minds, and create, no technological blessing will replace the loss.

The power of our new operating systems will work against us if we do not ensure every citizen a quality education that is based on facts, training, and the ability to apply what is learned. Education must be interdisciplinary and comprehensive. It must include elements that unite us as one people, with a common language, culture and curriculum. To preserve a system of, by, and for the people that provides us with freedom – life, liberty and the

pursuit of happiness – we must ensure that every citizen has a working knowledge of our Constitution and our history.

Finally, in the ages of mankind, we see similar patterns of major shifts in the operating systems of societies. Thanks to Joshua Meyrowitz and his introduction to *Medium Theory*, we can view history and cultures through their communication methods. We can understand how the traditional **oral societies** are changed by the transitioning **scribal societies** and then the major upheavals caused by the **print cultures**. Understanding cultural change helps us adjust to the upheaval we are experiencing through the **global electronic culture**. These excerpts from his work, Medium Theory,¹¹⁸ helped me understand that what is happening is a continuation of our development.

¹¹⁸ Meyrowitz, Joshua. *Medium Theory*. As found in: Crowley, David and Mitchell, David. Communication Theory Today. 1994. Polity. Cambridge, Oxford and Boston.

While print allows for new ways of sharing knowledge and industrialization enables the wide scale sharing of products, electronic media tend to foster new types of shared experiences.

As a result of the widespread use of electronic media there is a greater sense of personal involvement with those who would otherwise be strangers – or enemies.

Welcome the challenge of relevant education!

Glossary

Access to web services. Requires broadband or other services and a computer with an operational system advanced enough to utilize the world wide web (WWW).

Artificial Intelligence (AI). Machine programs that are designed to acquire and apply knowledge. AI allows avatars and other programs to perceive our world and interact intelligently within it. Soon AI driven programs will have many capabilities presently though to be uniquely human.

Avatar. A temporary manifestation or aspect of a continuing entity. They may be visual representations of individuals, animals or other forms. They can be programmed and controlled by individuals – i.e., students and teachers. They may serve as the connection between the learner and virtual worlds.

Bots. Web searching robots that use AI to navigate and seek data bases via algorithms that allow them to search entire knowledge bases in seconds.

Broadband capability. A specific range of wavelengths or frequencies of electromagnetic radiation that are used to carry information. High speed bandwidth is required for the internet and www to work well.

Charter school. Charter schools are considered public schools which are funded through public tax dollars. The first charter school was created in Minnesota in 1991. Charter schools are based on the idea that competition with existing district schools would create a better educational system. The Charter School ‘panacea’ may be one of the most destructive educational movements in our history.

Code or Codex. Either use means a system of symbols and rules used to represent instructions to a computer.

Collaboration in immersive 3D environments. More than one individual cooperating or interacting with others while immersed in virtual games and educational programs.

Conceptual Age. Daniel Pink's identification of what follows the *Information Age*, as described in his book, *A Whole New Mind*.

Context for learning. This is the part of experiential learning programs and activities that allow students (participants) to learn by doing, by being involved, by solving problems, and in cooperation with others. De Freitas and Neumann describe this as Explorative Learning.

Control systems. Programs that are not interactive, like a book. A system wherein student and instructor do not have control over content, activities, or information.

Cult. A term used in this work to describe a group organized around obsessive, especially faddish, devotion to or veneration for a person, principle, or thing. Herein, the use of the noun does not imply any specific religious group.

Cyber campuses. The essential elements of a campus designed and operated in virtual space.

Degeneration. The gradual deterioration of social operating systems that run counter to what is useful or needed.

Disinformation. One may lie by omission and by providing information that is designed to mislead.

Distance and on-line learning. The concept of a student using the internet to connect to a distant school or learning center and complete work on-line. Currently two-dimensional education that is only minimally interactive.

Education. In the broadest sense this includes both training and higher cognitive development. One cannot think beyond what has been programmed into the brain. Language makes it possible to give things

names (handles) so they can be used by the mind. Training provides this foundation. The term education is also used to describe the stage of learning that follows training wherein basic skills and data are applied through observation, evaluation, perspective, and insight.

Engaged learners. Student focus and energy is interactive when involved in problem solving, creating, cooperative activities,.

Epistemic. Cognitive, of, relating to, or about knowledge.

Epistemology. The branch of philosophy that studies the nature of knowledge, its presuppositions and foundations, and its extent and validity.

Fact-adverse. Limited thinking based upon inculcated beliefs or superstition. Used to intentionally mislead others by discounting the importance of facts. A political tool to control the poorly educated.

Factory System. The Industrial Age form of social organization used to conform and train factory workers and keep a class system of authority in power. 1880s – Present.

Formative evaluation. Tracking the point-to-point growth within an individual. Formative evaluation is based on the growth and development of each child. It does not include a comparison with external norms (See: summative evaluation).

Foundation skills (foundation/training). The first stages of the educational process are based in training. Training focuses primarily on learning skills and fact acquisition. Foundation training gives us the basis for advancement into the application of knowledge which is education. Education is based on a foundation of training.

Gamification. The use of games in education. Best explained by Gabe Zichermann. See: TEDxKids@Brussels (by TEDxYouth) on youtube.com.

IBM Innovate Quick Internal Metaverse Project. Worlds focused on communications and business activities. Known as Project Wonderland. 3D environments for collaboration.

Information Age. Unlimited access to information that is not controlled, interpreted, or manipulated by any church, government or political faction.

Interactive Age. A major breakthrough in communication between individuals regardless of location, sex, race, language, or culture. Expands each individual's contact with others.

Interactive instruction. Two-way communication between student and instructor and others who may participate in the ongoing dialogue and problem solving.

Inverted hierarchical relationships. Redesigning educational structures so that the maximum benefit is to the learner and those who work directly with learners, rather than support staff.

Interplay. Moving in and out of virtual worlds. Combining resources in real space and virtual space.

Irrelevant. Not having relevance to what is needed: sidetracked, digressive, divergent, petrified.

Learning games. Game technology (code) applied to activities (games) focused on learning through problem-solving and in-game activities.

Live chat. The ability provided by many interactive programs which allows real-time communication between individuals. This differs from traditional e-mail and texting because it runs as a sidebar available for use as learners are involved in virtual programs.

Marketplace competition. Supply and demand govern the ongoing success of a product. Schools are not widgets or cans of soup. When applied to education, the 'marketplace' concept that people purchase products because one product stands out above others, makes no sense. The marketplace movement has no educational validity, yet it is the basis for the charter school movement. As a result, untold numbers of children have been deprived of a quality education. We cannot re-label, recycle, or throw away human beings because they are damaged and victims of failed marketing experiments. In addition, ideologues,

cults, religious groups, and profit-driven entrepreneurs have been given access to the nation's children. School attendance is too often determined by PR war popularity. Marketplace driven programs misuse funds necessary for effective comprehensive education.

Massively Multi-player Online Role-Playing Games (MMORPGs). Players cooperate or compete to solve problems and achieve awards in virtual environments. Millions can play at one time, collaborating as necessary to advance or win.

Mash-ups. Combinations of technology and programs that result in major advances in understanding.

Master teacher. A teacher, usually with 5 or more years of teaching experience, who focuses on each child and the educational factors – past and present – that affect the child. Master teachers understand the whole curricula and the overall K - 12 educational program. They have honed their communication skills and are able to motivate and direct students. They have an in-depth knowledge of the subject area(s) they teach. They know how to evaluate a learner's ability to internalize and apply taught concepts and data. Most master teachers prefer working as a member of an interdisciplinary team.

Mastery criteria checklists. Information determined to be essential to the foundation of learning in each discipline is identified. The checklist is the basis for evaluating and documenting the learner's mastery of that information. Mastery checklists are ways of tracking student progress that give the teacher information about each student's need for additional teaching, or advancement to the next level of skills.

Medium theory. The extents and limits of communication through the ages. Joshua Meyrowitz. Identifying forms of communication from oral to electronic. An oral society. A scribes society. A print society. An electronic society.

Mind mapping software. Mind Jet and other programs that facilitate thought tracking and mapping through the creation of webs, flow charts, and visual charts of interconnections.

Mirror worlds – Virtual models or replications of the physical world. See any place on Earth through Google Maps or Digital Earth. Increasingly accurate views of political entities and topographical maps.

Multimodal. Engaged through multiple senses.

Multiple virtual worlds in virtual space. As we understand it today, virtual space is limitless and available for building any number of virtual worlds.

Ontology. The branch of metaphysics that deals with the nature of being.

Partial schools. Any school that does not have the facilities and staff to offer an interdisciplinary, comprehensive fact-based curriculum in at least ten disciplines. Most charter schools are partial schools. Most district schools are designed to be comprehensive.

Right and left brain thinking. In the late 1960s an American neurobiologist Roger W Sperry developed the concept of right brain and left brain thinking. He identified two very different ways of thinking. Right brain thinking is visual and processes information in an intuitive and simultaneous way, looking first at the whole picture then the details. Left brain thinking is verbal and processes information in an analytical and sequential way, looking first at the pieces then putting them together to get the whole. (about.com)

School choice. A simple answer preferred by too many politicians to a complex problem. Don't improve our schools, place the burden on the parent to change education by moving their child to another school. That way, the shamed school will magically improve itself. One day in the near future, we'll be asking our leaders how they could be so ignorant. Of course, when profit is the goal, choice is understandable.

Serious games. Games designed to involve the learner in experiential challenges requiring active participation and mastery of data and concepts.

Social network. The almost unlimited interactions between individuals and groups utilizing virtual space for initial and sustained communication.

Summative evaluation. This form of evaluation is based on an individual's mastery of specific data compared to established norms. It does not take into account growth within the individual. (See: formative evaluation).

Training. Starting in the formative years of development, before birth and continuing throughout life, data is inputted through the senses. Schooling inputs data of many types into the brain. This foundation data is made up of essential skills identified as necessary to comprehend different disciplines. Student mastery of these essential skills can be measured by evaluation techniques that include the student's ability to apply the information. If foundation data is not in place, or not accurate, the individual can not function well as an educated person in our complex world.

Virtual tutor & virtual mentor. Virtual entities with artificial intelligence which can be programmed to work directly with learners.

Voucher. Parents are given amounts of money they can use to pay for any school they feel offers their child a better education. The idea is these parents will 'vote' for good schools and abandon poor schools. Some politicians believe these parents, because they have voucher money, will be able to place their child in private schools or charter schools which are assumed to be better by the fact-adverse. There is no doubt they are wrong. The voucher system is the dream child of those who want access to our school tax dollars for personal and corporate profit.

Whole schools Usually called district schools. Most have been falsely accused of total failure and denigrated by those who want access to the tax dollars that support them. Although bound by structures designed for past ages (The Industrial Age), most are comprehensive schools with complete and validated K-12 curriculum. Most whole schools are constantly updating their curriculum and services for children. They must become relevant for the learners and needs of the 21st Century. There is no effective alternative to a dynamic whole school, nor have any of the alternative experiments (School choice, charter schools, or on-line and virtual schools proved to be effective comprehensive education programs.

Wiki. Is a website that allows the creation and editing of any number of interlinked web pages via a web browser using a simplified markup language or a what-you-see-is-what-you-get (WYSIWYG) text editor. Wikis are typically powered by wiki software and are often used collaboratively by multiple users. Examples include community websites, corporate intranets, knowledge management systems, and note services. The software can also be used for personal note taking. *Wikipedia and WikiLeaks are well known examples.*

Use Social Networks to Tell Others About *Vital Lies*

Readers select books for many reasons. The most important reason is word-of-mouth. Someone they respect tells them about the book and recommends it to them. In the case of *Vital Lies*, perhaps it is a parent who felt the book addressed key issues they needed to consider before placing a child in a school. They want other parents to have the information. They need to interact with others and get discussions going and changes made.

Whether the recommendation comes from a parent, educator, taxpayer, concerned citizen, or someone deeply concerned about America's future, it is their personal recommendations that get the book out there where it can be a basis for thought and action.

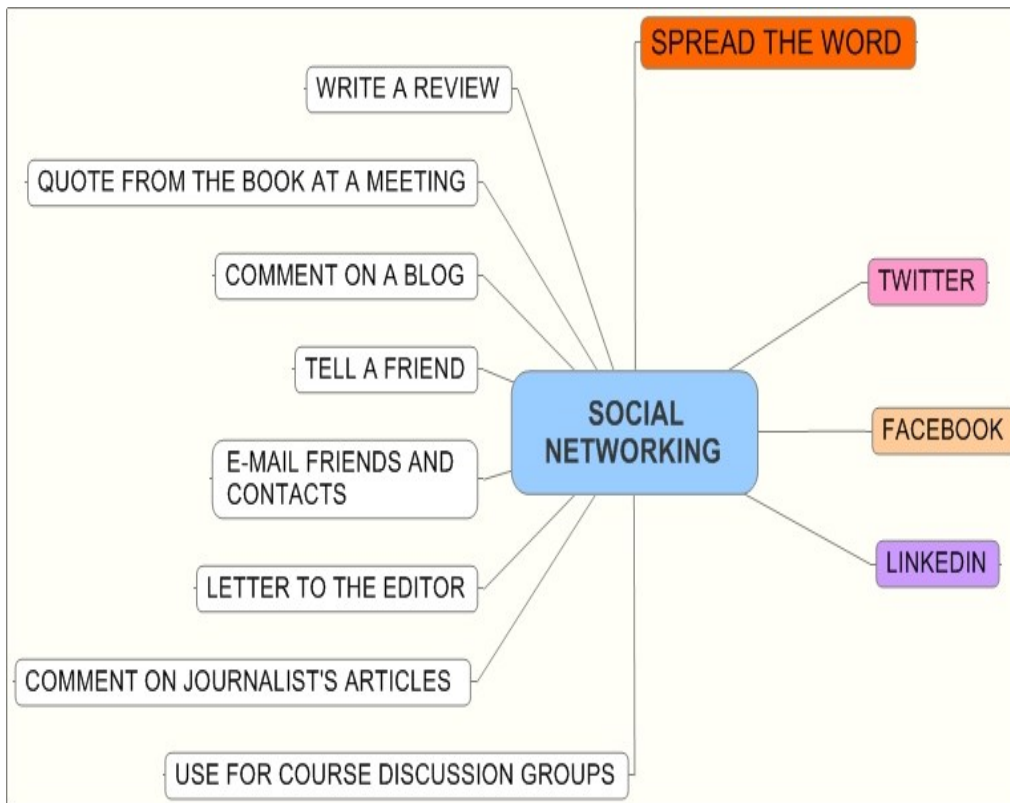
We all have social networks. Now that we have entered the Interactive Age, we can use technological advancements to tell others what we think and to make recommendations. If you agree or disagree with parts of the book, you can get your thoughts about it out for others to consider. You can urge others to read the book and tell their friends about it.

Readers can use e-mail, Facebook, Twitter, LinkedIn, or any of dozens of other virtual communities to comment on the book. Readers can write letters to the editor of the local papers. Individuals can quote from the book in community gatherings, school board meetings, professional meetings, in letters, and online. By doing this, people who are on the ground and dealing

with these issues decide the circulation and success of the ideas in the book.

Thank You!

The Editors



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Education:

Vital Lies: The Irrelevance of Our Schools in the Information Age.

Crow Canyon: Pioneering Education and Archaeology on the Southwestern Colorado Frontier (2nd edition 2009)

Unscrewed: The Education of Annie

The Spirit Series:

The Spirit of the Sycamore

The Spirits in the Ruins

The Spirit of the Estuary

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