

## Success in the Conceptual Age: Another Paradigm Shift

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*Just as everyone has begun to understand the demands of the Information Age, several authors propose another paradigm shift, identified by Pink (2005), as the Conceptual Age. This paper provides an overview of the trends that encompass this shift, some suggestions regarding the necessary knowledge, attitudes, and skills necessary for success in this new age, and the implications for schools and other social institutions as they help prepare children and youth for success in the 21<sup>st</sup> century.*

One of the primary functions of schooling is to prepare children and youth for adult success. However, as social and cultural changes occur, especially on a global level, so do the requirements for accomplishment. In the last 150 years, the American society has moved from an economy focused on growing products and making things to one of service and information processing (Naisbitt, 1982; Toffler, 1981, 1990). Huitt (1999a) summarized the major trends and megatrends associated with the Information Age and their implications for preparing children and youth for the 21<sup>st</sup> century. Now, less than a decade into the century, Pink (2005) proposes that humankind is headed into a new age, the Conceptual Age, having strong implications for desired knowledge, attitudes, and skills. Handy (1990) anticipated this shift with a call for “upside-down” thinking to cope with a patternless, discontinuous post-modern world. Kurzweil (1999) concludes these socio-cultural changes are unlikely to slow down anytime soon. In fact, he suggests that there will be as much change in the first quarter century as there was in the entire last century.

### The Tools of Change

Pilzer (1990) believes that a primary force behind these changes is the speed of technological development. Human society has long depended on the use of tools and technology. In the hunter/gatherer age, lasting tens of thousands of years, the knife, the spear, the bow and arrow, etc. provided the means of success. In the agricultural age, lasting thousands of years, the hoe, the plow, the tractor, and the harvester provided a similar foundation. In the industrial age, lasting hundreds of years, it was the factory, with standardized means of production, as well as ready access to resources, capital, and markets that were the keys to wealth and power. In each age, those individuals or social institutions that acquired the characteristics and resources necessary to take advantage of the new sources of wealth were able to enjoy a new standard of material living and social interaction. And now, just decades into the information age, it seems another profound change is occurring.

Notice that the time line for the transition to a new age is dramatically shorter with each paradigm shift. Dent (2004, 2006) discusses how each change, be it a paradigm shift or the adoption of a new product, follows a cumulative distribution curve, called an “S” curve. The time it takes from inception until the early adopters, or first 10 percent, make the shift is

equivalent to the time it takes to go from 10 percent to 90 percent adoption. Looked at another way, 80 percent of the change occurs in just 20 percent of the time. This is called the Pareto principle or 80/20 rule (Koch, 1999) and dates from the work of Vilfredo Pareto, a nineteenth century sociologist, economist, and philosopher. This principle is based on an exponential growth function that is difficult to discern when it occurs over thousands or even hundreds of years, but is self-evident when it occurs over decades or even shorter periods.

One might propose that Charles Babbage's work on the Difference and Analytical machines in the 1820's was the beginning of the computer and information age. Or perhaps the first use of the telegram on May 24, 1844, when Samuel Morse sent a message consisting of a series of dots and dashes from Washington, DC to Baltimore, could mark its beginning. However, the primary tool of the Information Age, a working electronic computer, did not become operational until the 1940s. While information-based workers accounted for just 10 percent of the American workforce at the beginning of the 20<sup>th</sup> century, it involved at least 25% by 1950, and more than 50% by the end of the century (Toffler, 1981; Toffler & Toffler, 1995). Even more importantly, there was no sector of American society or other industrialized nations, from work to leisure, that was not impacted by computer technology in the 1990s. These same influences are now occurring throughout the world, especially in Asian countries such as China, India, Korea, and Singapore.

A new technology, the development and expansion of the Internet and other connectivity infrastructure, is having every bit as much impact on individual societies and the global economy as did the plow, moveable type, mass production, and the computer had in previous eras (Friedman, 2005). The first description of a technology to connect individual computers occurred in the 1960s with some initial development begun in the 1970s. However, it was the proliferation of desktop computers in the 1980s, coupled with the introduction of a graphics interface in the form of web browsers and increasing connectivity speeds at work sites in the early 1990s, that propelled the Internet's exponential growth (Leiner et al., 2003). From a few million users worldwide in the mid-1990s, with home users connected to the Internet using baud rates considered painfully slow by modern standards, global Internet users exceeded 700 million in 2006 with more than 150 million (approximately 20%) residing in the United States (Associated Press, 2006; Comscore Networks, 2006). The Wall Street Journal Online (2006) cited a series of Harris polls showing that 70 percent of Americans could access the Internet from home, up from 16 percent in 1996. Other research conducted in 2006 found that more than 50 million households and 14 million businesses were using high-speed connections; nationwide, 79 percent of those with telephones and 93 percent of those with cable had access to high-speed connectivity (Wireline Competition Bureau, Industry Analysis and Technology Division, 2007). However, the fastest growth is in Asia; the number of Internet users in China, for example, increased 20% from 2005 to 2006 with the percentage of users with high-speed service increasing by 45 percent (Associated Press).

Because the Conceptual Age can be considered an extension and elaboration of the Information Age, the following is a short overview of the trends and megatrends discussed in an earlier paper (Huitt, 1999a).

- *Access to technology used to acquire, process, store, retrieve and use information*—this technology was the computer beginning in the middle of the 21<sup>st</sup> century; it is the Internet beginning in the 1990s.
- *The speed with which new technology was invented and mass produced*—increasing exponentially in the 20<sup>th</sup> century (e.g., a working lifetime to move from the use of

- mule teams to tractors; a decade to move from records to tapes and another decade to move from tapes to CDs).
- *High tech/high touch*—the need to simultaneously be more technologically proficient and socially skilled.
  - *A global economy*—information, products, people, etc. are moving easily across national boundaries; Canton (2006) sees climate change and reduction in sources of energy from fossil fuels as potentially devastating to political order around the world and as opportunities for new economic activity.
  - *Increased emphasis on distribution rather than manufacturing*—at the end of the 21<sup>st</sup> century less than 10% of the American workforce was involved in manufacturing.
  - *Decentralization*—emphasis on training people and organizations to make decisions and then implement them.
  - *Multiple options and a customized economy*—readily available alternatives and the ability to order exactly the product or service desired.
  - Change in the workforce
    - *Dejobbing*—more permanent part-time and temporary full-time work.
    - *Multiple careers*—an average of 10 to 12 jobs within 3 to 5 careers over a working lifetime.
    - *Increased emphasis on entrepreneurship and home-based businesses*—a result of pressures and changes in the workforce.
  - *Decreased emphasis on institutional-help and increased emphasis on self-help*—reduction in the government’s “safety net” and more reliance on personal responsibility for health care, retirement, etc.
  - *Longevity medicine*—Canton (2006) adds a trend that more and more people will routinely live beyond 100 years. While he sees mainly economic opportunities produced by this trend, Kotlikoff and Burns (2004) believe it will produce economic stresses that have not been experienced previously, especially in providing medical care and retirement income.

### **The Rise of the Conceptual Age**

Wolk (cited in Pink, 2005) suggested that, as a result of ubiquitous access to information, “...we’re progressing yet again—to a society of creators and empathizers, of pattern recognizers and meaning makers [where the greatest employment gains are made though small business].” Pink has labeled this new age the “Conceptual Age.”

In addition to the increased access to the Internet discussed by Friedman (2005), Pink (2005) suggests three forces are driving the movement to the Conceptual Age: abundance, Asia, and automation. By abundance, Pink means that most people in the United States, as well as those living in other post-industrial economies, have enough material wealth. This does not mean their desires are satiated; rather it means that people are looking to meet other than basic needs. Graham (2005) supports this hypothesis, citing data that happiness in a society increases as per capita income increases, but only up to a point. She states that the average worldwide figure is about \$8,000; Easterlin (2005) suggests the U.S. figure is likely double that (in 1996 dollars). After that minimum level is met, increases in income appear to be unrelated to happiness. Rather, other factors such as “rising aspirations, relative income differences, and the security of gains become increasingly important” (Graham, p. 47).

Pink (2005) suggests that the rising economic and political importance of Asia, especially China and India, is impacting economic activity on a global basis. These two countries account for almost half of the world's population. One of the many reasons that jobs from industrialized nations are being outsourced to these countries is a cheap and educated labor force. However, there has been a rapid increase in the number of young people attaining university-level education in both these countries. For example, India's colleges and universities produce about 350,000 engineering graduates annually (Konrad, 2003); China expects almost 5 million students to graduate from universities in 2007 (Anonymous, 2007). As their economies mature and manufacturers seeking cheap labor move elsewhere, these countries will be in a position to challenge the post-industrialized nations of North America, Europe, and Japan.

The economy of China is now the fourth largest in the world. It is the fastest growing economy of the last two decades with a growth rate of 8 to 10 percent annually (*People's Daily Online*, 2006). Even with these levels of growth, the Chinese economy is having difficulty creating jobs for all those who want to be employed. Most of the growth is along the seacoast; there exists a great deal of potential to expand manufacturing and other economic activities to inner China. This is a major reason the economy is expected to double in the next decade.

Finally, the rising use of automation means increased productivity and the requirement of fewer workers. The result is more people are available to do other activities. This has already occurred in agriculture and manufacturing (Pilzer, 1990) and is beginning to occur in information processing activities (Konrad, 2003). High-tech industries such as aerospace, computers and other office and communication equipment, pharmaceuticals, and biotechnology are leading the way in this process and, as a result, have doubled the growth rate of other manufacturing industries (Rausch, 1998).

Kurzweil (1999, 2001) shows that Moore's Law of Integrated Circuits, developed in the 1970s, predicts the doubling of computational power for computer processors every 24 months. That was true from 1950 to 1966; it shortened to 18 months in the 1990s and is now doubling every 12 months. At this rate of exponential change, Moore's Law will reach its physical potential sometime before 2019. However, Kurzweil suggests that processing techniques under development will allow parallel processing in three dimensions (similar to the human brain) and allow this doubling to continue throughout the 21<sup>st</sup> century. This will lead to a \$1000 computer having the processing power of a human brain by 2023 with that same power costing about one cent by 2037. At the same time, Internet connectivity speeds continue to increase from a standard of 256Kb (kilobits per second) to 6 to 10 Mb (megabits per second) available at a premium price today and on to 100Mb available in the near future (Vanston & Hodges, 2004). The result is that the driving force behind the trends discussed above will not only continue, but will accelerate, at least over the next several decades.

### **The Human Element of the Conceptual Age**

Aburdene (2005) credits another force for the movement to the Conceptual Age: a rise in human consciousness. While acknowledging that the speed of changing technology and innovation are important factors, she proposes that "there can be no invention in business or technology *without* human consciousness...technology is consciousness externalized (p. xvi, emphasis in original). Aburdene believes that an accompanying change in values and beliefs is driving a change in capitalism, which she considers the dominant force in economic activity in the post-modern era.

Aburdene (2005) suggests this rise in human consciousness is expressing itself in an increased interest in spirituality and spiritual development. Pink (2005) describes this as an increased emphasis on a search for meaning, a human need proposed previously by authors such as Frankl (1984), Handy (1999), and Maslow (1971).

One implication of this shift is that high meaning must now be added to the Information Age criteria of high tech/high touch described by Naisbitt (1982). Aburdene (2005) suggests three ways this trend of seeking conscious solutions will impact society:

1. *The values-driven consumer*—these consumers, already a significant minority and likely to be a majority in the next decade, are willing to spend a premium for products and services that match values.
2. *Spirituality in business*—many businesses now see a need to put emphasis on spirituality and meaningfulness, which heretofore had been thought to be outside the scope of business affairs. One reason is the competition for talented workers, many of whom are value-driven. It is also expressed as a desire to both meet the demands of being a successful enterprise as well as create societal good [see Business as an Agent of World Benefit, <http://worldbenefit.cwru.edu/>].
3. *Socially responsible investing*—another aspect of values-driven consumption: investors seek to invest in corporations that match their values. This is becoming increasingly important as over 50 percent of Americans now have some investment in stocks.

Canton (2006) reinforces the view that changes in the workforce, fueled by continuing globalization (especially in China), and the need for innovation, will be powerful trends over the next several decades. In fact, he believes the next age should be called the Innovation Age with a mantra of “free minds, free markets, free enterprise” (p. 48).

In summary, there is an infusion of values into economic activity with consumers having ubiquitous high-speed access to information and living in abundance. Workers and businesses are simultaneously coping with the pressures from globalization, especially new-found economic powers in Asia, and increasingly sophisticated processes of automation capable of delivering on those demands. This is creating a tipping point (see Gladwell, 2000) to a new era of human civilization. In the near future, issues relating to reduced sources of fossil fuels for energy, an aging population, and the need to deal with a changing climate, will produce both risks and opportunities. Because of the need for fast-paced innovation, more of the decisions of how to cope with these pressures are being made by middle managers and below, increasing the need for the preparation of leadership at these levels. These needs highlight two important issues: 1) what are the knowledge, attitudes, and skills necessary for success in this new age, and 2) how should schools and education be transformed to address these changes.

### **Acquiring Attributes for the Conceptual Age**

A cursory glance at the description of the coming Conceptual Age suggests children and youth will require additional attributes beyond those identified as important for the Information Age (see Huitt, 1999a, 1999b). These must be differentiated and integrated into a workable pattern by each individual as he or she enters and proceeds through adulthood. This process of increased sophistication and complexity is a basic principle identified in human and organizational development (Kegan, 1998, 2006; Lawrence, & Lorsch, 1986); it is likely to be a constant pressure for success in the twenty-first century.

Pink (2005) describes several attributes that parents, educators, and others responsible for the education of children and youth must consider. The first is that the development of empathy must accompany the development of logic and critical thinking (considered important for the information age):

The capacity for logical thought is one of the things that makes us human. But in a world of ubiquitous information and advanced analytic tools, logic alone won't do. What will distinguish those who thrive will be their ability to understand what makes their fellow woman or man tick, to forge relationships, and to care for others (p. 65).

A related attribute identified by Pink (2005) is the ability to tell a story, not just present an argument. His point is that the use of logic and argument is endless; with access to unlimited amounts of information, it is just a matter of time before someone discovers a counter argument that seems to be just as valid a use of logic. Rather "[t]he essence of persuasion, communication, and self-understanding has become the ability also to fashion a compelling narrative" (p. 66). This suggests that creative thinking will become at least as important as critical thinking.

Another attribute related to empathy, creativity, and story telling is the importance of design over utility and function. As Pink (2005) states:

It's no longer sufficient to create a product, a service, an experience, or a lifestyle that's merely functional. Today it's economically crucial and personally rewarding to create something that is also beautiful, whimsical, and emotionally engaging (p. 68).

This is self-evident in today's marketplace. From big-ticket items such as cars and homes to everyday purchases for clothing, accessories, and food, design plays a vital role. Individuals who can present their ideas, products, or services in ways that are attractive and evoke a sense of beauty, while at the same time functionally meeting a need, will more likely be successful.

A fourth attribute identified by Pink (2005) is the ability to play. He cites evidence that laughter and lightheartedness can be of benefit not only to health, but also professional performance. The focus of play is on process rather than product; on relationships rather than outcome. There is a willingness to take risks because the focus is on the activity or task rather than its result. This is somewhat related to the concept of flow identified by Csikszentmihalyi (1991). Flow is a period of optimal performance that is both fulfilling and engaging. It most often occurs "when a person's body and mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile" (p. 3). When one is *in the flow*, work can seem like play in that "people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it at great cost, for the sheer sake of doing it" (p. 4).

Lastly, Pink (2005) states that, in addition to developing an ability to focus on specifics, people must also develop an ability to put pieces together, or engage in symphony. These processes were described above as differentiation and integration; the terms analysis and synthesis convey similar concepts. The underlying principle is that an ability to analyze discrete parts and see patterns among them, to focus on individual tasks and simultaneously engage in multiple activities, to resolve distinct conflicts and live with unresolved tension, are all necessary in the Conceptual Age. As an example of developing the skills necessary to multitask, Reuters

(2006) reported that some families can cram 43 hours worth of activities a day by simultaneously using several technologies.

Covey, Merrill, and Merrill (1994) covered many of these points when they stated that the most important attributes for children, youth, and adults are the knowledge, attitudes, and skills related to living, loving, learning, and leaving a legacy. They believe everyone needs to reflect on his or her personal mission, the values, principles, and personal attributes associated with that mission, and to act with integrity in pursuit of that mission. Seligman (2002) would add that each person should be knowledgeable of his or her personal strengths [see <http://www.authentichappiness.sas.upenn.edu/>] and incorporate those into a personal mission statement.

### **Transforming Schooling and Education**

The preparation of children and youth for success in the twenty-first century is a challenging and daunting task. Schooling (learning in formal contexts) is not equivalent to education (learning in a wide variety of contexts, including schools) and, therefore, it is evident that all social institutions responsible for that preparation, not just schools, must make significant changes. However, schools provide the best opportunity for many children and youth to get the preparation they need: families are in disarray (Gottman, Murray, Swanson, Tyson, & Swanson, 2002), most students do not regularly attend religious services (Child Trends Data Bank, 2007), and community involvement is disintegrating (Coleman, 1988; Putnam, 2000).

Unfortunately, the schooling industry in the U.S. and most developed countries are structurally ill-equipped to handle the exponential rate of social change on a global scale discussed above. The national and state systems, operating in a top-down, hierarchical manner, are too unwieldy to keep up; traditional public schools, because of their governing and accountability structures, are simply not designed to change at a fast enough pace (Huitt, 2006b).

A second and compounding issue is that the desired outcomes of schooling are too narrow. Currently the dominant focus of schooling is on basic skills achievement (e.g., No Child Left Behind; see <http://www.ed.gov/nclb/landing.jhtml>). While basic skills are certainly important, exclusive concentration on them provides a woefully inadequate preparation of children and youth for the Information Age, let alone the Conceptual Age. Even other, more encompassing alternatives, such as the SCANS report (Secretary's Commission on Achieving Necessary Skills, 1991), the framework proposed by the Partnership for 21<sup>st</sup> Century Skills [see <http://www.21stcenturyskills.org/>], or even critiques of those systems (e.g., Huitt, 1999b) will need to be modified to address the demands and opportunities of the next several decades.

A significant challenge regarding desired outcomes needs to be addressed. Even if, somehow, a person or group could correctly identify the precise knowledge, attitudes, and skills that would be necessary and sufficient for success in the Conceptual Age, those would change relatively quickly as the global environment changes. One way to handle this dilemma is to consider Sergiovanni's (1994) work on community development. He proposed that planning and implementation of school-based practices should flow out from values rather than down from standards. He sees the narrowing of the curriculum as the opposite of what needs to be done to reform schooling. Some would argue this constraint is a result of the secular, utilitarian approach adopted by the American schooling system and most of the systems throughout the world (New, 2003). Sergiovanni believes there should be an equal emphasis on the development of community (he uses the sociological term *Gemeinschaft*) as well as the contractual relationships

among people and institutions, exemplified by standardized basic skills testing, that currently exists (he uses the sociological term *Gesellschaft*).

Baker (1992) proposes that the paradigm or worldview one uses to identify, interpret, and address important issues can be a limiting factor to discovering solutions that work. This is certainly a major challenge addressing school reform. A top-down hierarchy that directs and controls a standardized one-size-fits-all approach to curriculum and accountability is based on a mechanistic, reductionistic paradigm that guided some very productive schooling practices appropriate for the Industrial Age, but is inappropriate for the Information and Conceptual Ages.

### **A Systems Approach**

Throughout the twentieth-century, a wide variety of authors have proposed that a complex adaptive systems paradigm is more appropriate for living systems such as human beings and social institutions (e.g., Capra, 1996; Laszlo, 1996; Whitehead, 1978). A fundamental principle of working with complex adaptive systems is the recognition of the need to maintain a homeodynamic balance among competing domains of young peoples' development, such as the development of cognitive, affective, or social competencies as well as among competing influences such as families, schools, or communities (Huitt, 2003). Another principle is the importance of establishing communication among components in a network structure and allowing order to emerge as a result. This is the opposite of trying to create order by imposing it from the top of a hierarchy.

With everyone in the networked system having the same access to information, it follows that a decentralized curriculum development and accountability process allows more people and institutions to quickly develop creative solutions to rapidly occurring changes. As a first step in this decentralized approach, each school must identify a paradigm or worldview that it believes guides the functioning of reality. The school can then select a set of values, create a mission statement based on those values, and design a curriculum that flows out from those values. Finally, schools must hold themselves accountable for their student success in that curriculum (Barrett, 2006; Huitt, 2006b).

These different paradigms, visions, and missions will cluster into a relatively small set of similar groupings or families (Brooks, Kammel, Olmstead, Pack, & Stein, 2004). Rather than attempting to impose standards developed using a paradigm appropriate for the Industrial Age, government agencies need to facilitate the networking and systematic reporting of successes and failures based on clear and well-articulated set of values and standards that flow out from each of these families of paradigms. While the standards will differ both within and across these paradigm groupings, it is expected that each set will be based on the most current research available. For example, there is a large body of extant research that can be used to develop standards for affective/emotional development (Brett, Smith, Price, & Huitt, 2003) and conative/volitional development (Huitt, & Cain, 2005).

An analogy can be drawn with business production and accounting systems. Every individual business decides on a product or service that it believes meets the needs of a particular group of consumers. It builds a business model based on that product or service and hires professional managers to produce and market it. The business also hires accountants to develop and implement an accounting system that represents its unique circumstances. The system is developed using accepted accounting practices, but it is not expected that every business will use exactly the same ones. Bookkeepers are hired to collect data that will be analyzed using that



system. Auditors annually validate that the bookkeeping and accounting systems are working properly.

In the present top-down, hierarchical schooling system, outside auditors (i.e., state and federal agencies using standardized tests) have taken over control of the curriculum (i.e., the service being offered). As schools focus on preparing students for standardized tests, there is little debate about the desired outcomes for the children and youth that are the focus of schooling. Additionally, there are few, if any, school- or district-based accounting and bookkeeping systems that provide accepted information on student success for auditing purposes. Classwork and grades are accepted as measures of success by students and parents; they are not accepted by auditors (Kantrowitz, 2006).

Any school reform movement must first address curriculum values and standards and the paradigm(s) on which those are based. Data collected to affirm success to a particular set of standards focuses activity. Hummel and Huitt (1994), using the concept *What You Measure Is What You Get*, suggested that if the internal accountability system does not address the complete set of values and standards, related schooling practices are unsustainable. Continued reliance on centralized governance and accountability systems will result in the rapid abandonment of any attempt to implement a broader focus on competencies more aligned with the requirements of the Conceptual Age.

In the business world, Aburdene (2005) recognized that middle managers are becoming increasingly important for institutional and organizational leadership. Because of an increased access to information at all levels of the organization and decentralized decision making, middle-level managers must provide leadership in setting direction for their units and the corporation as a whole. A result is an increased need for leadership skill development and communication among units. A corresponding insight would recognize that school building principals and grade-level team leaders must be provided with opportunities to make decisions and communicate with others at a similar level as they cope with the fast-paced changes of the Conceptual Age.

### **Summary and Conclusions**

Preparation of children and youth for the rapidly changing twenty-first century deserves all the attention it is receiving. However, the context is shifting so rapidly that eras or ages of human activity previously lasting hundreds or thousands of years now exist for only decades. In fact, Laszlo (2006) believes that decisions made within the next decade will move humanity toward a breakdown in the world's environmental, economic, governance, and other systems or lead to a breakthrough towards more sustainable levels and types of activities. Reliance on mechanistic, reductionistic paradigm to determine needs and curriculum standards leads to a centralized, standardized approach that is inadequate to meet the demands of the twenty-first century. It is impossible for the top-down, hierarchical schooling system to keep up with the pace of change necessary to move our society towards the latter reality. What is needed is an approach to schooling that matches the best thinking about human development as well as the rapid changes in the ecology of that development (Mang, 2005). The demands of the Conceptual Age, incorporating, amplifying, and adding to those of the Information Age, require a decentralized approach to educational reform that balances creativity with a need for accountability.

There are five key elements to an orderly rather than chaotic approach to an efficient and effective reform of schooling:

1. Have a clear, articulated worldview paradigm that guides how one thinks about issues and focuses attention on facts and concepts as well as relationships among them.
2. Have as clear an understanding as possible of the core elements of the changing environment, especially those related to the Conceptual Age.
3. Have a clear, well-articulated vision of the domains of human potential that need to be addressed (e.g., Benson, Galbraith, & Espeland, 1994; Chickering, & Reisser, 1993; Ford, 1987; Gardner, 2006; Heath, 1991, 1994; Huitt, 2006a), identifying those most relevant to successful interaction with that environment.
4. Develop and implement a corresponding curriculum with a site-based accountability system that is reviewed by outside auditors on at least an annual basis. Each school and faculty must recognize the need to make constant, small changes that will keep the school and students on track towards the vision.
5. Provide a continuing education program for educators, parents, and community members so that all parties have the requisite knowledge of facts, concepts, and principles necessary to make important decisions quickly.

It is likely that transitions will include wrong turns, convulsions, and unforeseen opportunities. Significant transitions and transformations are never smooth. Nevertheless, the long-term change is somewhat predictable. Amara (as cited in Hutchinson, 2002) suggests that people overestimate the amount of change that can occur in the short term, but underestimate the amount of change that can occur in the long term. The consequence of this error is that when change does not occur as quickly as predicted, there is a belief that change is not going to occur at all and suggestions for a logical and holistic approach to preparing for what then seems just a lot of hype are tossed aside. People and social institutions are then caught off-guard and have to scramble frantically to make adaptations that could have been made in a more orderly step-by-step fashion.

The world is rapidly changing and schools need to be leading the way into the future rather than constantly reacting in a limited way to the ever-increasing complex demands made by students, parents, business and industry leaders, community organizations, and other stakeholders. We live in unprecedented times that demand extraordinary action.

### References

- Aburdene, P. (2005). *Megatrends 2010: The rise of conscious capitalism*. Charlottesville, VA: Hampton Roads.
- Anonymous. (2007). China faces 'great difficulties' finding jobs for everyone. *The Chosun Ilbo*. Retrieved March 2007, from <http://english.chosun.com/w21data/html/news/200703/200703140005.html>
- Associated Press. (2006, July 19). *China says number of Web users hits 123 million*. Retrieved November 2006, from <http://www.msnbc.msn.com/id/13931834>
- Baker, J. (1992). *Paradigms: The business of discovering the future*. New York: HarperBusiness.
- Barrett, R. (2006). *Building a values-driven organization: A whole system approach to cultural transformation*. Burlington, MA: Butterworth-Heinemann.
- Benson, P. L., Galbraith, J., & Espeland, P. (1994). *What kids need to succeed: Proven, practical ways to raise good kids*. Minneapolis: Free Spirit Publishing, Inc.

- Brett, A., Smith, M., Price, E., & Huitt, W. (2003). Overview of the affective domain. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved March 2007, from <http://teach.valdosta.edu/whuitt/brilstar/chapters/affectdev.doc>
- Brooks, R., Kammel, S., Olmstead, P., Pack, G., & Stein, J. (2004). *Blueprint for understanding and operating successful magnet and theme-based schools: Voluntary public school choice* (2<sup>nd</sup> ed.). Washington, DC: Roc EdTech Publishing, Inc.
- Canton, J. (2006). *The extreme future: The top trends that will reshape the world in the next 5, 10, and 20 years*. New York: Dutton.
- Capra, F. (1996). *The web of life: A new understanding of living systems*. New York: Doubleday.
- Chickering, A., & Reisser, L. (1993). *Education and identity*. (2<sup>nd</sup> ed.) San Francisco: Jossey-Bass.
- Child Trends Data Bank. (2006). *Religious services attendance*. Retrieved March 2007, from <http://www.childtrendsdatbank.org/indicators/32ReligiousServices.cfm>
- Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95-S120.
- ComScore Networks. (2006, August 14). Microsoft sites rank as top web property worldwide in June. Retrieved November 2006, from <http://www.comscore.com/press/release.asp?press=976>
- Covey, S., Merrill, A. R., & Merrill, R. R. (1994). *First things first: To live, to love, to learn, to leave a legacy*. New York: Simon & Schuster.
- Csikszentimihalyi, M. (1991). *Flow: The psychology of optimal experience*. New York: HarperCollins.
- Dent, H., Jr. (2004). *The next great Bubble boom: How to profit from the greatest boom in history, 2005-2009*. New York: Free Press.
- Dent, H., Jr. (2006). *The S-curve: Predicting product life cycles and reacting ahead of your competition*. H. S. Dent Foundation. Retrieved November 2006, from <http://www.hsdent.com/scurve.html>
- Easterlin, R. (2005). Feeding the illusion of growth and happiness: A reply to Hagerty and Veenhoven. *Social Indicators Research*, 74(3), 429-443.
- Ford, D. (1987). *Humans as self-constructing living systems: A developmental perspective on behavior and personality*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Frankl, V. (1984). *Man's search for meaning*. New York: Washington Square Press. [Originally published in 1946].
- Friedman, T. (2005). *The world is flat: A brief history of the twenty-first century*. New York: Farrar, Straus and Giroux.
- Gardner, H. (2006). *Multiple intelligences: New horizons in theory and practice*. New York: Basic Books.
- Gladwell, M. (2000). *The tipping point: How little things can make a big difference*. London: Little, Brown and Company.
- Gottman, J., Murray, J., Swanson, C., Tyson, R., & Swanson, K. (2002). *The mathematics of marriage: Dynamic nonlinear models*. Cambridge, MA: MIT Press.
- Graham, C. (2005). The economics of happiness: Insights on globalization from a novel approach. *World Economics*, 6(3), 41-55. Retrieved November 2006, from [http://www.publicpolicy.umd.edu/ecocon/details/fall2006/graham\\_sep22/WEC\\_00202\\_00603\\_Graham.pdf](http://www.publicpolicy.umd.edu/ecocon/details/fall2006/graham_sep22/WEC_00202_00603_Graham.pdf)
- Handy, C. (1990). *The age of unreason*. Cambridge, MA: Harvard Business School Press.

- Handy, C. (1999). *The hungry spirit: Beyond capitalism: A quest for purpose in the modern world*. New York: Broadway Books.
- Heath, D. (1991). *Fulfilling lives: Paths to maturity and success*. San Francisco: Jossey-Bass.
- Heath, D. (1994). *Lives of hope: Women's and men's paths to success and fulfillment*. Haverford, PA: Conrow Publishing House.
- Huitt, W. (1999a, August). *Success in the information age: A paradigm shift*. Revision of background paper developed for workshop presentation at the Georgia Independent School Association, Atlanta, Georgia. Retrieved August 2005, from <http://chiron.valdosta.edu/whuitt/col/context/infoage.html>
- Huitt, W. (1999b, October). *The SCANS report revisited*. Paper delivered at the Fifth Annual Gulf South Business and Vocational Education Conference, Valdosta State University, Valdosta, GA, April 18, 1997. Retrieved March 2007, from <http://chiron.valdosta.edu/whuitt/col/student/scanspap.html>
- Huitt, W. (2003). A systems model of human behavior. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved March 2007, from <http://chiron.valdosta.edu/whuitt/materials/sysmdlo.html>
- Huitt, W. (2006a, April 26). *Becoming a Brilliant Star: A model of formative holistic education*. Paper presented at the International Networking for Educational Transformation (iNet) Conference, Augusta, GA. Retrieved March 2007, from <http://teach.valdosta.edu/whuitt/brilstar/brilstar.html>
- Huitt, W. (2006b). *Educational accountability in an era of global decentralization*. Paper presented at the International Networking for Educational Transformation (iNet) conference, Augusta, GA, April 23-27. Retrieved March 2007, from <http://chiron.valdosta.edu/whuitt/papers/edaccount.doc>
- Huitt, W., & Cain, S. (2005). An overview of the conative domain. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved March 2007, from <http://teach.valdosta.edu/whuitt/brilstar/chapters/conative.doc>
- Hummel, J., & Huitt, W. (1994, February). What you measure is what you get. *GaASCD Newsletter: The Reporter*, 10-11. Retrieved March 2007, from <http://chiron.valdosta.edu/whuitt/files/wymiwyg.html>
- Hutchinson, V. (2002). *The future of work: A capable age—Some thoughts on the “zero waste” of young people*. New Plymouth, NZ: The Jobs Research Trust. Retrieved November 2006, from <http://www.jobslatter.org.nz/vivian/youth02-3.htm>
- Kantrowitz, B. (2006, May 16). The 100 best high schools in America. *Newsweek*. Retrieved March 2007, from <http://www.msnbc.msn.com/id/7761678/site/newsweek/>
- Kegan, R. (1998). *In over our heads: The mental demands of modern life*. Cambridge, MA: Harvard University Press.
- Kegan, R. (2006). *The evolving self: Problem and process in human development*. Cambridge, MA: Harvard University Press. [Originally published in 1982; see [http://www.mtso.edu/rlichtfield/Develop\\_theory/kegan/sld001.htm](http://www.mtso.edu/rlichtfield/Develop_theory/kegan/sld001.htm)].
- Koch, R. (1999). *The 80/20 principle: The secret to success by achieving more with less*. New York: Currency.
- Konrad, R. (2003, July 13). Tech jobs leave U.S. for India, Russia: Jobs exports may imperil U.S. programmers. *Associated Press*. Retrieved March 2007, from <http://www.cnn.com/2003/TECH/biztech/07/14/moves.offshore.ap/index.html>

- Kotlikoff, L., & Burns, S. (2004). *The coming generational storm: What you need to know about America's economic future*. Cambridge, MA: The MIT Press.
- Kurzweil, R. (1999). *The age of spiritual machines: When computers exceed human intelligence*. New York: Viking.
- Kurzweil, R. (2001). The law of accelerating returns. *KurzweilAI.net*. Retrieved March 2007, from <http://www.kurzweilai.net/articles/art0134.html?printable=1>
- Laszlo, E. (1996). *The systems view of the world: A holistic vision for our time* (Advances in systems theory, complexity, and the human sciences). Cresskill, NJ: Hampton Press.
- Laszlo, E. (2006). *The chaos point: The world at the crossroads*. Charlottesville, VA: Hampton Roads.
- Lawrence, P., & Lorsch, J. (1986). *Organization and environment: Managing differentiation and integration*. Boston: Harvard Business School Press. [Originally published in 1967].
- Leiner, B., Cerf, V., Clark, D., Kahn, R., Kleinrock, L., Lynch, D., Postel, J., Roberts, L., & Wolff, S. (2003). *A brief history of the Internet*. Reston, VA: Internet Society. Retrieved February 2007, from <http://www.isoc.org/internet/history/brief.shtml>
- Mang, P. (2005, Spring). What is education for? *Independent School Magazine*. Retrieved March 2007, from <http://www.regenesisgroup.com/articles/wief.pdf>
- Maslow, A. (1971). *The farther reaches of human nature*. New York: The Viking Press.
- Naisbitt, J. (1982). *Megatrends*. New York: Warner Books, Inc.
- New, R. (2003). Reggio Emilia: New ways to think about schooling. *Educational Leadership*, 60(7), 34-38.
- People's Daily Online*. (2006, December 21). Chinese economy to maintain high growth. Retrieved March 2007, from [http://english.people.com.cn/200612/21/eng20061221\\_334552.html](http://english.people.com.cn/200612/21/eng20061221_334552.html)
- Pilzer, P. (1990). *Unlimited wealth*. New York: Crown Publishing Group.
- Pink, D. (2005). *A whole new mind: Moving from the Information Age to the Conceptual Age*. New York: Riverhead Hardcover.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Rausch, L. (1998). *High-tech industries drive global economic growth* [Issue Brief]. Arlington, VA: Division of Science Resources Studies, National Science Foundation. Retrieved March 2007, from <http://www.nsf.gov/statistics/issuebrf/sib98319.htm>
- Reuters. (2006, September 25). *Families pack 43 hours of activity into 1 day*. Retrieved November 2006, from [http://today.reuters.com/news/articleinvesting.aspx?type=comktNews&rpc=55&storyid=2006-09-26T035838Z\\_01\\_N25311198\\_RTRIDST\\_0\\_MEDIA-YAHOO-SURVEY.XML](http://today.reuters.com/news/articleinvesting.aspx?type=comktNews&rpc=55&storyid=2006-09-26T035838Z_01_N25311198_RTRIDST_0_MEDIA-YAHOO-SURVEY.XML)
- Secretary's Commission on Achieving Necessary Skills, The. (1991). *What work requires of schools: A SCANS report for America 2000*. Washington DC: U.S. Department of Labor. Retrieved March 2007, from <http://wdr.doleta.gov/SCANS/>
- Seligman, M. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.
- Sergiovanni, T. (1994). *Building community in schools*. San Francisco: Jossey-Bass.
- Toffler, A. (1981). *The third wave*. New York: Bantam Books.
- Toffler, A. (1990). *Powershift*. New York: Bantam Books.
- Toffler, A., & Toffler, H. (1995). *Creating a new civilization*. New York: Turner Publishing.

- Vanston, L., & Hodges, R. (2004). *Forecasts of higher bandwidth broadband services*. Austin, TX: Technology Futures, Inc.
- Wall Street Journal Online, The. (2006, May 24). *Poll shows more U.S. adults are going online at home*. Retrieved November 2006, from [http://online.wsj.com/public/article/SB114840389678260791-IREjYVgN\\_rGLeE3\\_6Djin1jeJZc\\_20070523.html?mod=rss\\_free](http://online.wsj.com/public/article/SB114840389678260791-IREjYVgN_rGLeE3_6Djin1jeJZc_20070523.html?mod=rss_free)
- Whitehead, A. N. (1978). *Process and reality: An essay in cosmology*. New York: The Free Press. [Originally published in 1929].
- Wireline Competition Bureau, Industry Analysis and Technology Division. (2007, January). *High-speed services for Internet access: Status as of June 30, 2006*. Washington, DC: Federal Communications Commission. Retrieved March 2007, from [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-270128A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.pdf)

A paradigm shift is a sudden, major change in the way you view something, brought on by new information or a new detail that was formerly unknown. Paradigm shifts occur in every area of life, dramatically impacting everyone they touch and leaving a legacy of large-scale transformation in their path. This book is about seven such paradigm shifts, seven major emerging change A paradigm shift is a sudden, major change in the way you view something, brought on by new information or a new detail that was formerly unknown. I'd be curious to see if you have the same concerns that I do about news in the Information Age. The book devotes a whole chapter to the changing concept of news and news sources. Enjoy! The concept of paradigm shift offers one means of making such connections. This article describes eight changes that fit with the paradigm shift in second language education toward what is most often described as communicative language teaching. Well-known examples of paradigm shifts in the physical sciences include from Ptolemeian to Copernican astronomy and from Newtonian to quantum physics. Paradigm shifts have also occurred in the social sciences, e.g., sociology and the humanities, e.g., art. [-1 Another possible explanation for the lack of implementation of this paradigm shift stems from the fact that it has often been presented in a piecemeal fashion, rather than as a whole.