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A Personal Journey Through Instructional Technology: A Vision of Excellence Approached From a System of Magnanimity

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A PERSONAL JOURNEY THROUGH INSTRUCTIONAL TECHNOLOGY:

A VISION OF EXCELLENCE APPROACHED FROM

A SYSTEM OF MAGNANIMITY

by

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DEDICATION

As I come to the end of an important chapter in my life, I would like to dedicate this final project to my parents, Frederick Bilton Gilbert (1918-1993) and Myrtle Lillian Townsend (1920-1999), and to my maternal grandparents, Benjamin Franklin Townsend (1893-1975) and Annabella Leach (1899-1985) – whom I honour and appreciate.

ACKNOWLEDGMENTS

As with any important endeavour, the support and encouragement of many caring and dedicated individuals have made all of this possible. I can write about magnanimity because my life is blessed with countless magnanimous people. Professors, friends and family members have all shown me great kindness and generosity these past three years as I have found and accepted new parameters. I entered this programme on my 53rd birthday while still recovering from cancer. The pursuing journey has been both rewarding and extremely challenging. Even so, it has been worth every sacrifice and effort. I believe I am a better and healthier person because of it.

In a special way, I would like to thank Gwen Baird for her friendship and willingness to go the extra mile on my behalf. I am also grateful to my committee members: for Dr. White's keenness to serve on my committee and for his encouragement; for Dr. Burnham's patience (and Kleenexes) during my watersheds both academically and emotionally; and for Dr. Eastmond's constant support through everything and for his enthusiasm and assurance during the rough parts of the journey that all would end well. I especially want to thank him for allowing me creative latitude to explore new ideas and ways of expressing them. This added a dimension of enjoyment and delight and at times motivation to keep going.

At the completion of this report and degree, I have arrived at a deeper appreciation for life because of the interactions and visions associated with this singular learning experience. Thank you to everyone!

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CHAPTER I

INTRODUCTION

**If you treat an individual as he is, he will stay as he is,
but if you treat him as if he were what he ought to be and could be,
he will become what he ought to be and what he could be.
Goethe (Dale, 1984, p. 36)**

This paper is a summary of what I have learned through my studies and observations in the eclectic field of Instructional Technology. In order to provide a comprehensive narrative, I desire to take the reader on a phenomenological journey into some personal insights acquired from my academic studies in Instructional Technology as well as my past and present experiences, my teaching, medical and musical background and my beliefs. Throughout this journey, I will endeavour[1] to substantiate the need for Instructional Technologists and all educators to design and implement tools and methods that address all aspects of the human intelligence and uniqueness of the learner. I will also explore the purposes and ends of education. This phenomenological exploration will look at the need to establish learning communities based on firm moral underpinnings and will present an approach to Instructional Technology founded on research and experience from other disciplines. In conclusion, I will present a personal vision of excellence for Instructional Technology that will be approached from a system of magnanimity.

I would ask the reader to proceed through this personal journey with an open mind and heart. Though you may find many areas of commonality and divergence, I

[1] All spelling throughout this report will be Canadian style English.

would ask that this be a shared enterprise by which each of us evaluates honestly where Instructional Technology is presently and in what direction we need to take design, development and application of instruction and technology in the future to make it a truly human oriented activity. It is my hope that because of this search, guided by a vision of excellence and magnanimity, new approaches to design, education, assessment and evaluation may be considered that will lead every learner to a greater understanding, appreciation and acceptance of self in order to contribute more fully in a worldwide community.

This paper will draw upon the thoughts and research of many experts in diverse disciplines while being directed by my own reflective inquiry. Some of my questions will be answered in this report. However, many will require more time and thought before they can be fully addressed. Several of these foundational questions guiding my inquiry include:

1. What is, or should be, the purpose or purposes of education in a global society?
2. Can a common purpose for education be reached when there are so many differing assumptions and epistemologies?
3. What is the role of instructional and technological design in education?
4. How can Instructional Technology bring a greater sense of personal worth and peace to the learner?
5. What are the various aspects of intelligence that would need to be a part of any vision for education?
6. What is transformational education?

7. What is transcendental education?
8. What is the difference between transformational and transcendental education?
9. Given the global zeitgeist is it possible to develop a more comprehensive and congruent approach for Instructional Technology?
10. What could other fields and disciplines contribute to the design of such an approach?
11. What would an integrated, congruent, transcendent model of Instructional Technology look like?
12. What could this model be called?

Personal Background

A poem of unknown authorship reads, "Two men looked out from prison bars, One saw the mud the other the stars." Although I understand the benefits of mud and appreciate its significance and uses, my gaze has always been fixed more on the stars. Many would call me an idealist. I would like to refer to myself as one who seeks to know, understand and apply truth. Even though I strive for excellence, perfectionism is not an attribute that I deem commendable. Magnanimity toward others and self is the quality that I value and desire to attain. It is the guiding attitude for which I see a worldwide application in order to achieve true connection and community within learning and living.

Childhood Experiences

On an exceptionally hot August day, I was born in Toronto, Ontario, Canada in 1947 at the Salvation Army Hospital. I was the second oldest in what would become a family of five children. For the first four years of my life, I lived in Malton, Ontario, across from what is now the Lester B. Pearson International Airport, in an apartment complex that had been military barracks during WWII. These buildings were fire hazards, and nearly everyday the fire alarm rang loudly through the corridors of this complex. In the spring of 1952 my parents, brother, sister and I moved into a newly built home in a suburb of Toronto.

My parents were educated in Toronto. Although they did not complete their high school education, both were intellectually keen. My father was an Air Traffic Controller for the Royal Canadian Air Force during WWII. After the war he delivered coal for a while, then established his own Haulage Company. All of his trucks were painted in the colours of the Buchanan tartan because historically the Gilberts were a sept of the Buchanan clan. My father's family had a pseudo-affluent air about them. Nevertheless, the wealth and prestige of his forefathers had been squandered and depleted by the time I was born. Still, the family pride and taste for the refined had not lessened. In contrast, my mother's family were mostly humble farmers. Her father, though, was a printer and editor, the son of a printer. Her mother was the second oldest in a family of twelve children and the daughter of a farmer-fireman.

My maternal grandparents played a significant role in my nurturing and rearing. They were more like parents to me than grandparents. They even lived with our family

for a short time. When I was two years old, my parents and grandparents bought adjacent lots in a wooded area by Lake Simcoe and built cottages. In the summers I would spend nearly every weekend at the cottage swimming, fishing, chopping wood, biking, climbing trees and catching fireflies, snakes, turtles, birds and frogs. We never had running water or electricity in our cottage. Therefore, I learned at an early age to cook on a wood stove and to appreciate the luxury and convenience of indoor plumbing. The cottage represented the heart of my childhood. The city was my home for school and work, but the cottage was my oasis. My grandparents eventually winterized their cottage and made it a permanent home. Then the cottage became a year round experience and retreat for me.

When I was one-and-a-half years old, I had bacterial meningitis. Because of the effects of this disease and the influence of the home environment, I had many learning challenges. A British imperial mind-set also affected my upbringing and education. This influence changed gradually, though, as television programming from the U.S.A. became a more predominant part of the home and daily routine. Our first television arrived in 1953. What an event that was! This picture-machine became another member of our family and had its say both night and day.

Government reforms in 1967 and later in 1982 brought greater independence to Canada from the Queen and British rule. These changes, along with a new Canadian flag and an official national anthem, brought, what I observed to be, an "Americanisation" of the "older" Canadian life-style. These nationalistic movements seemed to be reflected in the language and thinking of the younger generation which included my younger brother and sisters. My oldest brother and I have distinct British-Canadian pronunciation,

phraseology, and writing styles. My sister, the middle child born in 1951, has a transitional way of speaking and writing. The two youngest children in the family, however, have very American-like speech patterns and writing styles as well as outlook on life. I sometimes question how much of this was due to the influence of the media both within and outside of the home or perhaps the political reforms or a combination of both.

In the winter of 1952 when I was four years old, I remember standing beside my older brother in front of the wooden, upright radio listening to King George VI's funeral. I remember the radio dramas that brought laughter and suspense. I also remember the animal stories, told by one of the greatest storytellers in my life, my maternal grandmother. My childhood was filled with rich images and narratives.

School Years

In school, radios were turned on to hear the Yankees and Dodgers playoff games or to listen to the news. Film presentations were the 16mm or filmstrip variety. Books, chalkboards, chalk, beige notebooks with black lettering and blue lined paper, alphabet charts, erasers, ink wells and blue ink with stick-pens were the standard tools from grade one to grade eight. Fountain pens were allowed in 7th grade, but ballpoint pens were considered messy and unacceptable for good penmanship during the elementary years.

In High School, or Collegiate as we called it, classrooms expanded into laboratories, music rooms with either orchestral or band instruments, as well as Home Economics rooms with ovens, stoves, counter tops, sewing machines and workbenches. Overhead projectors, 16mm film projectors and films, and filmstrip projectors and

filmstrips were considered "high tech" along with the school's PA system that allowed the principal to call students and teachers to the office. A radio in our Home Economics room provided coverage of John Glenn's historic landing. I remember being in French class when the principal's voice came over the school's broadcast system to tell us that President Kennedy had been assassinated. Televisions were not part of the media within our schools while I was a student. There were no photocopies, only mimeographed sheets with purple-inked letters.

When I attended Nursing School from 1967 to 1971, after matriculating from Wexford Collegiate Institute, the film productions continued to be 16mm films. Programmed learning workbooks were provided along with basic medical equipment. Teaching labs were equipped with hospital beds and sheets, bedpans, thermometers, blood pressure cuffs, stethoscopes, syringes, tourniquets, ace bandages and other basic first aid supplies. New techniques like bed making, bed baths, injection giving, vital sign taking and bandaging were practiced in the lab and on each other. Other tools and supplies were part of the hospital setting. Most of our learning and medical experiences were hands-on supervised training supplemented with community experiences and classroom lectures.

Personal Assumptions and Beliefs

During my second year of Nursing School, I was baptized a member of the Church of Jesus Christ of Latter-day Saints. My religious upbringing had been diverse. My parents were married in the Calvary Baptist Church in Toronto. My mother was Baptist, and my father Anglican. However, my parents never took us to church except on

special occasions. My oldest brother and I, on our own, visited many different denominations when we were children. Ultimately, he and I decided to attend St. Jude's Anglican Church on a regular basis. My brother and I, and years later my two younger sisters and youngest brother, would walk or take a bus to church every Sunday without our parents.

My father worked for an Orthodox Jewish family. Hanukah and Yom Kipper were as familiar to us as Christmas and Easter. Our home in the suburbs of Toronto was in the shadows of the Precious Blood Catholic Church and Convent. Most of my friends belonged to this diocese. On Fridays before Vatican II long lines of people would form to buy fish and chips in the plaza behind our house. Even as a child, I enjoyed learning about different ways of life. I learned to respect the various beliefs of my family members and friends.

While working as a nurse, I learned that understanding the belief systems of my patients was important. I quickly came to understand that healing involved much more than medication and medical procedures. When my patients were worried or upset about the hospital food and routine, I would listen to their concerns and try to alleviate the mundane problems associated with their hospitalisation. When I was finished with my rounds and responsibilities, I would talk with my patients about their families and life's concerns. With the babies I would take time to hold and talk to them.

When I went for my final interview on the medical-surgical ward with my nursing supervisors before graduating, I was told that all of my patients on the unit had been interviewed, and a study had been conducted to determine why they healed more rapidly than other patients with the same ailments on this unit did. The nurses and doctors had

observed that I was the common factor in their care. In fact, in order to prove their theory, I was assigned to some of the most difficult patients to see if the trend of healing would continue even with very serious problems and the orneriest of individuals. And it did. This all occurred without my being aware of what was happening.

When my nursing supervisors spoke with my patients, they said that they felt cared for and listened to, and because of this, they had very positive feelings for their doctors and the hospital. At my graduation the medical staff presented me with an award for further education in medicine, and the Benedictine nuns from one of the convalescent hospitals in the community presented me with the compassionate nursing award. I share this not to boast but to illustrate that early in my professional career I learned that as humans we need more than science to heal. Babies without love and proper emotional support fail to thrive and even die despite excellent medical interventions. I believe that all children and adults need to feel valued and loved in order to progress physically, emotionally, intellectually and spiritually.

Expanding My Education and Experiences

In 1972, after graduating as a Registered Nurse, I attended Brigham Young University (BYU) in Provo, Utah. The small classrooms and labs of my former schooling in Ontario were now huge lecture halls. University brought a greater independence and personal responsibility for learning. Many of the classes during my first semester were in history and genealogy. As part of my class work, I was introduced to microfilm and microfiche readers. After six months of schooling at the university level, I left for an 18-month health mission for my Church in the western part of Mexico

to teach preventive medicine. Before leaving for Mexico, I was taught how to make visual aids using pictures cut from magazines or drawn with stencils, then laminated or assembled using glue, a hot press machine and other similar methods.

Poster board pictures, water, chlorine, salt, sugar, spoons, syringes, first aid supplies, flipcharts, flannel board stories, puppets and other similar items were my teaching aids while in Mexico. Mimeographed sheets, filmstrips and filmstrip projectors, tape recorders and audiotapes, along with creative teaching methods, community open houses and hands-on learning were used to teach basic health principles and practices. As a health missionary I was advised to utilize as many real life objects in my teaching as possible in order to help the people understand. To illustrate this need we were told about some American health educators who had travelled to South America to teach the native people about the prevention of malaria. The instructor drew a huge mosquito on a large piece of poster board to illustrate the transmission of this disease. After the lecture, as the class members were leaving the building, many of these people said to one another, "We have no need to worry. There have never been mosquitoes that big around here."

While working in a very small pueblo in the Sonora Desert, the Public Health director asked me to help teach the local people about the importance of having their children immunized. Many false ideas had to be dispelled because most mothers believed that evil spirits entered their children when they received these injections. Due to these beliefs, children were hidden under beds or elsewhere when Public Health officials came to visit. A good turn out for free immunization campaigns was 20% of the children.

In an attempt to educate these people and to correct their misconceptions about immunization, I made a picture book presentation, explaining in very simple terms how disease is transmitted and prevented. Then I went from house to house teaching as many families as possible. I first had to gain the trust of the people and their children. Each presentation was personalized with plenty of time for questions and answers. I had no idea if this approach would make a difference in the compliance. However, it provided a wonderful opportunity to get to know most of the people in this desert community. When the next immunization campaign came along, I volunteered as a nurse to help administer the vaccines. To everyone's surprise, especially mine, there was a 78% turn out of children. Something had worked.

On another occasion in this same community I taught a small group of women how to make a simple electrolyte solution using purified water, lemon juice, salt and sugar. Dehydration was a major problem for the grape pickers as well as the elderly and the children when temperatures were in the 100's for weeks. Everyday long lines of dehydrated people formed outside of the hospital and clinic. Unbeknown to me this small group of women who had been taught how to make this solution went home and made some for their own families. When they saw the beneficial effects it had, they went to the fields with jars of this simple homemade electrolyte drink for the workers to drink. Then they taught them how to make it. Within a few days the long lines of dehydrated people diminished, then disappeared. Soon the doctors in this pueblo came seeking to know more about this solution and other health prevention methods. They even agreed to participate in a health fair to teach the community about the various types of medical assistance available.

Teaching and Technology

While teaching the older generation in the west part of Mexico from Tijuana to Mazatlán from 1972 to 1974, lessons had to be simple and practical. A memory game where pictures were uncovered and matched, then a message revealed beneath, was far beyond the comprehension of all of the groups of men and women we taught who were 30 years of age or older. No matter how much time we took to explain how this game worked, the faces of the older people remained blank or confused. The children of these same individuals, however, had no problem understanding the instructions and enjoyed playing the game. There appeared to be a stark difference between the learning skills for games and abstract concepts of the older and younger generations in this part of Mexico in the early 1970's.

Despite the general poverty in the barrios, most homes had a radio and/or television. Otherwise, the technology and lifestyle in this part of Mexico was reminiscent of life in a much earlier era. Most of the learning for the older generation was experiential with little or no formal education. Few knew how to read or write. Many of the children, though, were able to receive some schooling before being pressured into the workforce by economical needs. Most of the younger generation knew how to read and write.

For eight years after my health missionary experience, I taught Spanish to young men and women and to older adult couples and individuals in the Missionary Training Center (MTC) in Provo, Utah. During this time I helped develop an orientation and teaching programme for the senior learners. Perception and stress levels were important considerations for learning success for these older men and women. If they had accepted

the adage "you can't teach an old dog new tricks," this belief had to be up-rooted, eliminated and replaced before any real progress was made. Frequent words of encouragement were required for the senior learners to achieve. Those who had been scarred or scared by previous educational experiences needed the greatest support.

Adult learners with the most sense of worth had an easier time accepting and assimilating new sounds in Spanish. They also felt more comfortable about making mistakes, knowing that errors were a common part of the learning process. Adults who were more extroverted or who had experience with public speaking, acting or stage performance excelled. Fear kept others from taking risks and expressing themselves in a strange new language. The greater their sense of inadequacy and self-consciousness, the more laborious and difficult learning was for them. When physical impairments or emotional struggles hampered learning, the faith and determination of the individual became the most critical factors to determine success. I often observed that a desire to succeed and a belief that learning was possible at any age, despite obstacles, allowed many to reach beyond their "statistical" abilities (according to standardised achievement tests) to realise a high degree of mastery.

As a teacher in the elementary, secondary, and university levels in Utah during the 1980's and 1990's, I encountered another dimension of learning. I saw children and adults, in regular and special needs classes, respond to genuine concern and praise. The greatest resistance to learning that I experienced came from children in the middle school grades who had been fed a constant diet of worksheets and passive teaching methods. When these children were given more interactive and dynamic learning experiences, some were excited while others were overwhelmed and scared. Yet even those who were

unsure and frightened at first, after initial disbelief and objection, began to embrace the opportunity and challenge to learn in new ways, especially when they felt supported as capable, valued individuals. The highest compliment I have received as a teacher came from a young man in a special education class who told me that my teaching was "Rad." He was animated by the realisation that learning can be fun, and that teachers can be caring.

As a nurse I have seen some of the most difficult patients heal and the most complex situations resolve when the whole individual and his or her circumstances were given consideration. Often I have worked with and taught children who have been victims of trauma. One family I had the privilege to work with had been badly traumatised by a house fire that left the two youngest children severely burned. I learned that a caring, loving, yet structured environment provided the atmosphere for both healing and learning. As I established a close working relationship with teachers in the children's schools, much stress was reduced. Communicating openly and frequently with family members, neighbours, school and medical personnel facilitated the recovery of everyone involved in this traumatic situation. These children, through patient, fun, caring and firm teaching, aided by the best of modern medical technology available at that time, obtained catharsis and healing.

While living in Wellsville, Utah, in 1993 I worked at the Jensen Farm, a living historical farm. Busloads of schoolchildren would come to the farm to learn what it was like to work and live on a farm in the early 1900's. They would collect eggs from the chicken coop and were shown how to grind corn into meal. I would be dressed in era clothes working in the kitchen when the children arrived. It was fun to start a fire in the

wood stove and then cook chocolate chip cookies for the children. These students would gather fresh eggs and help me mix the cookie batter. The wood stove fascinated them. We would show them how butter was made and how clothes were washed without the benefit of electricity. They took tours of the barn, the root cellar and the summerhouse. It was a step back in history for all of us. The teaching tools were from another era, and yet much learning occurred.

During my research and studies for a Master's in Music from 1994 to 1998, I worked with many children with varying degrees of inattention. Many of them were extremely intelligent with exceptionally high Intelligence Quotients (IQ's) who were considerably under-stimulated mentally by their school curriculum. Others were lost in an educational system that had abandoned them when they did not fit into the "normal" mould or that they had learned to manipulate to their disadvantage. Many of these children found it difficult to adapt to one-dimensional linear-based learning centred on science and math, even though possessing great talents and abilities. These same children, however, when presented alternative ways of learning, began to adapt and often excelled.

A few of these children had been diagnosed with classic textbook cases of attention disorder with or without hyperactivity. Even the most severely affected children in this category were able to focus sufficiently to learn when given the proper doses of appropriate medication. Providing these boys and girls with additional assistance both in the home and in school further enhanced their abilities to stay on task and progress. Neurofeedback training accompanied by Mozart's music and one-on-one training, with suitable rewards for focussing and being within assigned neuro-

frequencies, helped many more of these children, through the assistance of technology, to learn what it felt like to concentrate.

In addition to all of these experiences with teaching, I have also taught both large and small groups of individuals for over thirty-five years as an in-service director, an independent study instructor for BYU, a speaker for two hospital organisations, and a teacher for the Church of Jesus Christ of Latter-day Saints. Over the past forty years, my approach to teaching has not changed significantly, but the delivery tools I use have. Photocopiers have replaced mimeograph machines. Digital technology has made the 16mm film cumbersome. Computers, DVD's, and CD's have taken instruction into a new era.

Yet, despite all of these technological advances, I have seen and experienced transformation and transcendence with or without the assistance of sophisticated technological tools. Years after teaching a class or course, former students have related to me how something said or done had changed their lives and had set them on a new and better path. For some this meant nothing more than brushing their teeth in a different way; for others it meant a new way of interacting with family members and associates. For one woman it meant deciding not to commit suicide and finding greater meaning and purpose in her life.

CHAPTER II

THE PURPOSE OF EDUCATION IN A GLOBAL SOCIETY

Though there is no substitute for intelligence, it is not enough. There are human beings who have intelligence but do not have moral courage to act on it. On the other hand, moral courage without intelligence is dangerous. It leads to fanaticism. Education should develop both intelligence and courage.
Sidney Hook (Dale, 1984, p. 44)

Different Perspectives

Anciently education was a religious responsibility, and its purpose was to glorify God. For the Greeks education was the means to self-mastery. They believed that "much as one would use a hammer and a chisel to carve a block of marble, one uses ideas and knowledge to forge one's own personhood" (Orr, 1994, p. 5). The Romans and Babylonians, fearing the influence of foreign gods and religions, considered control of every aspect of social life a necessity, including education (Davenport, 1999). Throughout the ages more and more governments took charge of educating their citizens. Many of these governments used education as a means to indoctrinate and enslave. Often during times of totalitarian rule, the more highly educated became a threat to these regimes and were removed from their supposed power. Today in an era of secularization and relativism, the purpose of education has become vague, lacking a clear vision (Banathy, 1991; Postman, 1995).

In these times of uncertainty of purpose, minds are at risk of being filled with useless facts and meaningless information yet left uneducated to meet the realities of a world filled with unbridled violence, abuse and immorality. Palmer (1993b) believes that violence not only includes the conflicts fought on battlefields, but it "always involves violating the integrity" of another (p. 2). Therefore, as we contemplate the purpose for education, those aspects of education that encourage and promote community and cooperation and those that violate integrity need to be evaluated carefully.

In our present global society, the need for a new perspective and direction for education is essential. As long as children compete with one another for recognition and rewards, elitism and striation of society will continue unabated. At the same time, it is important to determine who should make policies for education and who should determine its purpose. John Stuart Mill said concerning education that "the intervention of government is justifiable, because the case is one in which the interest and judgment of the consumer are not sufficient security for the goodness of the community" (Kazamias, 1966, p. 97). If we accept Mill's view, we must be cautious that the "government by the people and for the people" does not become "a people by and for the government" (Davenport, 1999). Therefore, as we search for a cohesive purpose for education, we must think about all of the factors that draw us together as a human family. Governments must not have the only say in the educating of our children; nor should minorities be allowed to solely dictate the direction of public schooling.

A. A. Hodge (1887), a Princeton theologian, was concerned about the secularization of education and its gain in popularity. He described the situation in his day as "Protestants object to the government schools being used for the purpose of

inculcating the doctrines of the Catholic Church, and Romanists object to the use of the doctrines of the Protestant churches. The Jews protest against the schools being used to inculcate Christianity in any form, and the atheists and agnostics protest against any teaching that implies the existence and moral government of God. Hodge further explained that "if every party in the State has the right of excluding from the public schools whatever he does not believe to be true, then he that believes most must give away to him that believes least, and then he that believes least must give away to him that believes absolutely nothing, no matter in how small a minority the atheists or agnostics may be." Eventually, according to Hodge, "the United States system of national popular education will be the most efficient and wise instrument for the propagation of Atheism which the world has ever seen" (p. 280).

Educational Reform

Banathy (1991) believes that education is a key agent in the transformation of society and should be designed and implemented through collaborative efforts involving "learning communities." These communities are "living systems" that call for the participation and collaboration of parents, teachers, administrators and all concerned individuals and agencies, and are flexible enough to adapt to social change. However, these communities have to be able to settle on a common purpose and vision in order for them to work (Coombs, 1988; Darling-Hammond, 1997). Education, according to Banathy, is an integration of all the social services available for human development and

learning. He also believes that we need to transcend the current ways of educating rather than just change or reform them.

Postman (1995) states that educators once became famous for providing reasons for learning, but now they become famous for developing a method. He thinks that most modern schools, along with the rest of society, do not have a clear purpose for education any more; and that many reformers are looking for the means (the when, where and how) to improve schooling rather than looking at the end or purpose for schooling. Postman further conjectures that if school has purpose, it could become the chief establishment through which our youth find reason for continuing to educate themselves. However, without a comprehensive vision, our lives and learning become centred on the needs of the moment, and our thinking and emotions are consumed with material possessions. Establishing the purpose and end for learning must be pervasive and taught in the family, culture and nation. It also needs to be taught within business and government. If, however, there is not a well-defined and widespread vision, we will continue to focus on means and constantly miss the mark or real purpose.

Since many believe that our educational system is not in step with present day society and has separated itself from the realities of our time, a system of education that meets the needs of our existing world conditions is essential. However, I think that a visionary system is needed in order to transcend the current conditions and assist in bringing greater connection and harmony to the world. In order to go beyond the present system of education, it will require much more than talking and writing on the subject. It will involve communities having a common vision or philosophy, shared values and a

plan that sets forth the ideal model and image. What education should be or ought to be or what we want it to be will reflect what we value, and in turn what society values.

Collins (Collins & Tamarkin, 1990) says,

> to solve our education crisis, we need to work on improving the entire system and every cog in the wheel. We need skilled, creative, persistent leadership at the top on both the local and national levels. We need a much higher degree of parental involvement, not just in the home but in volunteer capacities at every school in the country. We need strong principals who care more about children than about personality polls, politics, or job preservation. And, most importantly, we need dedicated, well-trained, highly respected, well-compensated teachers (p. 5).

Collins is not alone in her assessment of the education system. In a phone conversation with Charles Reigeluth in 1993 at Utah State University, he described the educational system as a sorting system that compares children with one another, and it needs to change.

Postman (1995) thinks that "the narratives that underlie our present conception of school do not serve us well and may lead to the end of public schooling" as we know it (p. 61). He foresees the privatization of schools and their takeover by corporations unless these narratives change. Despite his scepticism and pessimism about our current educational situation, Postman believes that "school will endure since no one has invented a better way to introduce the young to the world of learning," and "that the public school will endure since no one has invented a better way to create a public" (p.196-197). He also reminds us that "Americans invented the idea of public education for all citizens and have never abandoned it," and "each day . . . immigrants come to America in hopes of finding relief from one kind of deprivation or another" (p. 183). If it

fails, it will be because there is no longer any clear, pervasive moral, intellectual or social vision.

In his book ***The Courage to teach: Exploring the Inner Landscape of a Teacher's Life,*** Palmer (1998) describes four stages of development in social movements for change. These stages include 1) individuals finding a centre for their lives outside the organisation that they desire to change, 2) individuals finding others with similar goals and vision, then forming communities of congruence for support, 3) these communities of congruence then going public and 4) a new system being created to push the movement along and to put pressure on the original institution to change. According to Palmer, "educational reform has achieved a scale in Stage 3 that is disproportionate to the scale of Stage 2: There is more talk about reform in the public realm than one would anticipate from the small number of communities of congruence in the privatized world of traditional education" (p. 178). Strong, united communities for change equal in strength and commitment to the rhetoric will make a greater impact on transformation and allow for eventual transcendence from the current educational system.

A Shared Vision and Purpose

In doctoral and professional discussions, I have observed that unless these discussions are directed carefully and well, whoever can articulate best or has the most control, even if his ideas and thoughts amount to no more than distorted truths supported by personal ideologies, he can often drown out the findings and positions of the quieter, less articulate majority. This reflects a growing predicament among educators and

intellectual communities responsible for educational research and reform. Educational leadership is far from being a unified community. As practitioners continue to operate behind closed doors in schools and institutions with little or no understanding of how or why they teach the way they do, those in positions to provide research and answers are too often spending their time arguing semantics and personal etiologies and producing technologies for their own aggrandisement. The pursuit of egocentric concerns may mean our children become guinea pigs or pawns in a very complicated moral dilemma.

For some the purpose of education is to prepare youth for better paying jobs. Government officials in the United States seem to believe that good "standardised" education allows the citizenry to be more competitive in the world market. For Plato (1968), Jefferson (Tyack & Hansot, 1982), Dewey (1963) and others, education is the means to develop valuable, thinking citizens who are capable of clear reasoning and who have a willingness to preserve freedom. Still others like Hirsch (1987) believe that education should make us culturally literate. Bloom (1987) proposes that students be taught the great Western literature in order to develop a firm moral foundation. He states that "every educational system has a moral goal that it tries to attain and that informs its curriculum. It wants to produce a certain kind of human being. . . Aristocracies want gentlemen, oligarchies men who respect and pursue money, and democracies lovers of equality" (p.26). Then what should an educated American know and be? Bloom doubts whether this question can be answered, asking if there are no shared goals or vision for education, is social contract possible?

Postman (1995) reminds us that Bloom's approach is considered biased and oppressive by many, while claiming that Hirch and others have confused the consequence

or outcome of education with its purpose. They try to define what an educated man is without answering what an education is for. However, I do not think a purpose can be reached without considering the influence it will have upon the learner. Though I would hesitate to make a method, product or outcome the focus of education, they are an integral part of any vision and cannot be totally ignored.

If bigotry is a component of an educational curriculum and end, then many within the system will learn to be bigots. A friend who grew up in East Germany during the Communist rule said that her teachers would spend the day indoctrinating the children in socialistic thinking. When she went home, her parents would spend the evening reviewing the lessons she and her siblings had received and teaching them their way of thinking and perceiving which was based on a more moralistic, self-governing framework. I wonder what would have been my friend's worldview without the vigilance of her parents. Children who are threatened, teased or bullied in the school setting by teachers or other learners would have to be extremely resilient not to be affected negatively in some way (McCain, 2003).

Rigid religious and moralist traditions can prohibit human progression and destroy societies. The Salem witch trials and the Crusades provide sufficient evidence of this fact. Even so, moralist traditions that provide boundaries and safeguards cannot be removed from education without devastating results. As we create more flexible and adaptable systems that are unique to the needs of a global community, we have an obligation to protect one another against the whimsical effects of floating ethics that often tolerate decision-making based on the situation rather than law or sound principles.

In Palmer's (1998) opinion, social movements for change that go public are tested by the diverse values and visions of the community. However, if these movements for change remain true to their convictions and risk opening themselves to all of the opposing forces, then both the movement and its integrity will grow. He reminds those involved in the challenge of change that "the outcomes of most movements are modest" (p.180). According to Palmer, altering an established system occurs by small "incremental adjustments" that help to shift the logic of the organisation towards the ideal and vision of the movement. Nevertheless, many who see the need for change choose to remain victims within the organisation rather than risk involvement and face the inevitable opposition. Yet Palmer cautions that if we are not true to ourselves and take up the fight to make needed changes, we may do damage to both our true selves and the community.

In contrast to Palmer's approach to change, Banathy (1991) advocates a completely new educational system to replace the present archaic one. He compares the current system to the Titanic and our efforts at reform to rearranging the chairs on her deck as she continues to sink. A new system would represent a newly designed, safer ship to rescue those aboard the sinking vessel. Small adjustments may take too many years to bring the collapse of the old organisation. Whichever way one chooses to negotiate change will depend on the urgency for change and the integrity of the individuals and the community involved.

While some see the purpose of education as preparation for life (Postman, 1995), others believe schooling is only a small part of a lifelong learning process (Bateson, 1994). I believe that the overall purpose for education is all-inclusive, all-pervasive and

lifelong. All formal schooling, including preparation and training for work, life experiences, even cultural and religious training, is to develop magnanimous citizens of a global community.

CHAPTER III

REACHING A COMMON PURPOSE FOR EDUCATION DESPITE DIFFERING ASSUMPTIONS AND EPISTEMOLOGIES

He drew a circle that shut me out –
Heretic, rebel, a thing to flout.
But Love and I had the wit to win:
We drew a circle that took him in.
Edwin Markham (see Dale, 1984, p. 52)

Assumptions

Children, even before they can speak, learn some of their assumptions and perceptions of the world through the expectations of their parents and others in their culture. While teaching a class in Iran, Bateson (1994) invited an American and Iranian mother to visit for two hours with their 10-month-old infants. Each mother came at a separate time and was observed by the students. The American mother allowed her child to explore, to mingle with the students, and to become dirty from crawling on the floor while interacting with the class members. The Iranian mother, however, brought a large rug to sit on with her baby and kept the child confined to this area by her eye contact and other interactions and distractions. She offered the baby food periodically; something the American mother had not done.

The students in the class were able to relate to the parenting style and expectations of the Iranian mother because they met their own cultural assumptions and norms. They felt she was the better parent. The purpose of these observations was not to show who had the better parenting skills but to allow them to observe the subtle way mothers teach

values and assumptions to their children by the way that the mothers respond to the children. Symbols, non-verbal and verbal clues from family members and cultures train us to respond in certain ways. Understanding our family and cultural backgrounds and histories help reveal these expectations and free us from assumptions and traditions that are faulty or hostile to our progression. Bateson (1994) wonders what it would be like if we not only developed colour vision but "cultural vision" as well.

Ways of Knowing

During the past three years from 2000 to 2003 at Utah State University in the Instructional Technology Department, I have listened to my peers and professors talk about their opinions and beliefs, and I have marvelled at the various ways reality is interpreted and at the multiplicity of philosophies that exist (Slife & Williams, 1995). In fact, I find myself overwhelmed by the boundless variety of voices and ways of thinking. As I acknowledge these differing viewpoints and epistemologies, I also recognise that my thinking is influenced by my own assumptions and beliefs. My views and thoughts are coloured by my age, cultural background, spiritual beliefs, previous education, and experiences. Nevertheless, I believe that my insights have merit. I also believe that truth outside of personal constructs exists, and it needs to direct our design efforts and teaching. Truth is neither fragmented nor competitive but communal and cooperative in nature (Palmer, 1998). However, I also assert that extremes are dangerous and fanaticism destructive.

As Palmer (1993b) observes, there is "a profound fear of subjectivity." At the same time, "unfettered objectivism is equally as cruel as unfettered subjectivism" (p. 3). Objectivism keeps things at a distance. Too much involvement with what needs to be known is believed to distort knowledge and make it undependable. Our objective, analytical and experimental tradition has allowed us to reduce people and things to objects and has disconnected us from the world and one another. "We are driven to unethical acts by an epistemology that has fundamentally deformed our relation to each other and our reaction to the world" (Palmer, 1993b, p. 7).

Standards for education, biological warfare, terrorism, AIDS, cloning, recreating man with microchips and Artificial Intelligence are all part of our present and future reality. Politicians and private groups are heard contending with one another on these and other issues (Carovillano, 2003), using their own research data to support their positions. What decisions are reached seem to depend on the judgments and beliefs of those in power and on their ability of persuasive communication. Many in our global society have become laws unto themselves, rationalizing and justifying anything that supports their wants and their views. We need to heed the warnings of past and present wisdom that our ways of knowing and believing shape lives.

Palmer (1993b) illustrates his belief that "every way of knowing becomes a way of living" with a story about the Indians of the Six Nations. He relates how some white commissioners from the territory of Virginia, after negotiating a treaty with the tribe elders, invited some of the tribe's young men to attend William and Mary College. The elders pondered the offer for an evening. Then on June 17, 1744, they gave their answer

to the commissioners. The elders acknowledged that the white commissioners meant well and thanked them for their generous offer. Then they said,

> you, who are wise, must know that different nations have different conceptions of things, and you will therefore not take it amiss if our ideas of education happen not to be the same as yours . . . Several of our young people were brought up at the colleges of the Northern Provinces. They were instructed in all of your sciences, but when they came back to us, they were bad runners, ignorant of every means of living in the woods, neither fit for hunters nor counsellors, they were totally good for nothing (p. 1).

The elders graciously declined the offer of the commissioners. Then to show their gratitude they told the commissioners that if they wanted to send a dozen of their young men to them, the elders would gladly educate and instruct the young men in their ways. The commissioners politely declined the elders' invitation.

As we proceed through life, no one is entirely independent from the actions and imaginations of others nor their environment or culture (Bateson, 1994). Freedom allows for a wide range of etiologies, beliefs, and opinions. Some today call religious writings "hate literature" because they are not reflective of their values and thinking. Others clamour for the protection of freedom of speech and the separation of church and state as they become religions unto themselves, dictating and enforcing their own philosophies and ways upon society while cloaked in judicial robes and using legal jargon.

As a nation we involve ourselves in research and pursuits of higher learning and yet continue to depend on the resources of hostile foreign countries to provide energy to the homeland. At the same time research for alternative energy sources goes either under funded or not funded at all until war or other crisis dictate the necessity to become more

self-reliant. We live in a world filled with divergent voices and great dichotomies which influence and at times determine our freedom.

Finding Truth and Connection

We reason about what is ethical and acceptable yet fail to consider what is right. However, analysing who is right or what is right without a common vision of reality and acceptance that truth exists may perpetuate a vicious cycle of reasoning. I believe truth is based on universal laws and knowledge and can only be found and administered by wisdom and unadulterated love. Truth illuminates our realities and helps them become more congruent. When we seek to become congruent with truth, we honour the worth of every soul and strive to edify and improve one another without derogatory labelling but rather with encouragement and sincere concern.

We live in a time of great paradoxes and conflict of words. For some, reductionism is the only path to truth. That is if one can come to an agreement on what is meant by truth. Others embrace a global point-of-view, dismissing the advantages found in knowing the worth of the individual parts. Many choose the extremes of "either or" thinking. Still others are relativists, advocating diverse views without any encumbering absolutes and morals while constructing personal truth and reality. Scholars argue for days and years to define what reality is, then cling to codes of conduct that are determined by a legacy of floating and situational ethics.

As far as I am concerned, if a tree falls in the forest, whether I witness it or not, it has happened. The very movement of the tree in the wind thousands of miles away

changes the world and me. My thoughts, my words and my deeds in turn influence the world and everyone and everything in it. This is the connection that I believe exists. If someone tells a lie or is dishonest in his or her dealings with another, the lie still occurred whether the statute of limitations has expired or not. Its influence will be felt yet by future generations unless integrity intervenes and sets a new course.

I am aware that it is easy to support and to cite references in order to substantiate one's own reality, especially when insufficient research or conflicting data are available. Often what we believe is a matter of opinion and testimony rather than fact. Yet, as we open ourselves to truth, we also open ourselves to other dimensions of understanding that bring greater knowing. As our ways of knowing expand and organize themselves more and more with truth, our thinking, emotions, social relationships and moral reasoning are changed and refined. Truth sets us free from cognitive distortions and biases and emotional limitations. It gives us the ability to see ourselves, others, things and experiences as they really are and as they really can be. Our challenge becomes to develop such communities of truth and cooperation that open us to deeper association with others, transformation and transcendence.

CHAPTER IV

THE ROLE OF INSTRUCTIONAL TECHNOLOGY IN EDUCATING A GLOBAL SOCIETY

If a new synthesis of thought and feeling is to be attempted, we must think and feel our way toward the place of design in a necessary context of social renewal.
Potter (2002, p. 45)

Defining Technology

Technology is a term that has many meanings (Erekson, 2001; Selby 1993). According to Frey (1987) and Mitcham (1978), technology consists of four major characterizations: Objects, Processes, Knowledge, and Volition. Most of us are familiar with the objects of technology. They consist of the machines and devices that have been produced and used by man. Humans have designed and used technologies from the beginning of time. Tools invented primitively assisted with food production and preparation, with manufacturing shelters and raiment, and with communication. Other tools were designed for weapons; some were made for musical instruments; and still others were employed to expand and enhance human powers. For many the sound of an alarm clock signals the beginning of another day. The radio, television, computer and phone are common accessories of daily living. Within the home, vehicle, office, factory, hospital and school we depend on an assortment of sophisticated appliances, equipment and instruments.

Along with these objects are the processes that characterize technology. They consist of the systems like the Internet or the use of devices and objects within systems. The third characteristic of technology is knowledge. This is applied knowledge and specific methods of inquiry, design and evaluation. Volition, the fourth characteristic, refers to human will or the means by which the capabilities of man can be expanded and extended to meet needs. Volition also refers to the way that humanity controls and is controlled by technology (Erekson, 2001).

The word technology is derived from the Greek words *techne* meaning "art and skill" and *logia* meaning "science or study." If we accept the definition that "technology is the process and product of human skill and ingenuity in designing and making things out of available resources to satisfy personal and societal needs and wants" (Selby, 1993, p. 683), then in a real sense every person is a technologist and a technology. In addition, a specific technology may or may not be the product of scientific knowledge initially. The wheel was designed long before any scientific explanations were available to account for why it worked.

Erekson (2001) has defined technology as "a synergistic noumenon that occurs through the interaction of knowing, thinking, and doing while extending human capabilities." He further defines a noumenon as "an object that is conceived by reason and is . . . thinkable but not knowable by the senses." According to Erekson "technology should be thoughtful action based on core human values" or "human ingenuity in action" (p. 4). Our values and culture ultimately determine the technologies that we design, use and fund. However, the more complex our technologies become, the greater the need for highly trained technologists to design, construct, operate and repair them. In many cases

this has caused a critical shift of power and loci of control from the common user to the professional designer and technologist. In the process many of the needs and concerns of the individual have been overlooked or forgotten (Norman, 1988). Moreover, most new technologies are designed and used with very little regard to their eventual influence upon the individual and society. This can become a major concern when applied to young learners in their early development.

The Power of Technology

It has been said that if a technological device can replace a teacher, it should. Both teachers and tools need to complement and strengthen teaching for the sake of the learner. "A good tool misused or applied out of time can be a destructive force . . . it is through the teacher's sensitivity that each child is guarded and protected against misuse of even good teaching methods and techniques" (Kapp, 1978, p. ix). Technologies, both objects and processes, should protect the learner and support the purpose of education. If teachers and tools are in competition with one another, what will this communicate to the learner? I believe that the teacher, his words and his tools are all technologies. What technological tools and processes we accept and use have the power to change our lives. When monasteries began using church bells to chime the hour, a new technological era was ushered in and then continued as clocks were invented to replace the bells.

I remember living in Mexico with a people who did not wear watches and who did not pace their lives around time. I would schedule meetings and classes and arrive early to prepare. Then I would wait and wait and wait. An hour later the class would

begin. If I started on time, people were disappointed, but their habits were not changed. I finally decided that "when in Rome do as the Romans do." I continued to arrive at the appointed hour. However, I learned to bring something to do until the crowds arrived. Even though technology receives its value from those who use it, the more a society embraces a new technology, the more it is shaped by it. For this reason, it is vitally important that societies remain in control of the technologies they invent and embrace, or they will be controlled by them.

When the television became popular, many scholars like Marshall McLuhan (Wagner, 1964-1965) wondered if we would become superficial thinkers because of this new medium. Others tried to anticipate how our perception of self and the world would be shaped by mass media. Their voices of concern were faint and obscured by the enthusiasm of viewers and the anticipation of producers' profits. Each time new technologies and technological processes are introduced, the same important questions are asked, but society continues to be recreated in spite of these questions.

Instructional Technology

Computers and other technologies and technological systems may assist with teaching, but how should they be used and to what end? Most instructional taxonomies (Bloom, 1956; Clark, 1999-2000; Classweb) are concerned with cognition and the educating of the thinking mind. Classifications centre on the scaffolding of learning. Access, encoding, storage and retrieval of information are the pre-eminent concerns for most cognitive scientists. Even affective development is most often viewed from a

cognitive perspective (Edify Ministries, 1999-2001; Huitt, 1999; Huitt, 2001; McNeill, Burrows & Bellamy; Teglasi, 1995). Much of the scientific investigation in learning has been conducted on how the brain works and learns.

Functional Magnetic Resonance Imagery (fMRI) presently provides an exciting added dimension to this research allowing imaging to occur during specific brain activity. Nevertheless, these studies only afford a limited aspect of learning as they focus primarily on brain anatomy, activity and consequential "input" and "output" of information. These elements, though important, compose the substructure of most linear, reductionist models of learning and do not provide the complete picture. Teaching techniques based on these foundations may be successful to an extent, but they provide a narrow concept for education and learning. Reducing learning to input, outcomes and products may unwittingly lessen the learner's worth and objectify humans and their potential. All technologies applied to the teaching-learning process need to be carefully designed and used to reinforce and expand both the teacher's and the learner's mastery without losing sight of the human aspect. All teaching and technology must focus on the betterment of the individual as a complete being and an integral human component of the technological system of learning. Whatever techniques or tools we employ in education should be subordinate to that end.

According to Palmer (1998) "teaching, like any truly human activity, emerges from one's inwardness, for better or worse." When Palmer teaches, he believes he projects the condition of his soul onto his students, his subject and their way of being together. "The entanglements" he experiences in the classroom are often no more or less than the convolutions of his own "inner life." Thus, teaching holds a mirror to the soul. If

we are "willing to look in that mirror and not run from what we see, we have an opportunity to gain self-knowledge – and knowing oneself is as crucial to good teaching as knowing the students and the subject" (p. 2). What may need to be added to Palmer's list of things to know – besides self, student and subject – are the technologies both in the form of tools and systems present and their effects upon the teacher, the subject and the learner.

Instructional and Technological Design

Technologies that are designed and employed to assist with the learning process are involved with Instructional Technology at its very basic level of human education and change. A piece of chalk, a black board, a book, a word, each is a technology that may be as important and effective as a computer or a satellite presentation in teaching and training. If we concentrate, however, only on "high tech" in the classroom, who or what will determine the final locus of power and control in the educational environment? Unless we keep the focus with the individual and his development, rather than on technological devices, we may educate intellects but not caring and complete human beings.

Effective teaching and learning can be accomplished with plows and pots and pans, as well as with computers and digital gadgets. If we lose sight of the essential purpose for which technologies should be designed and utilized, we run the risk of also losing sight of the bigger picture of what long term impact a technology may have upon an individual and society. We have a moral obligation to look more attentively at why we design technologies the way we do. If learners and teachers are seen as part of the

process and volition of technology, then "hows" need to follow the "whys." Otherwise, our technologies and instruction may encourage increased personal isolation, self-aggrandizement, individual and world conflict, and other aberrant social behaviour.

While many teachers are paying more attention to the moral dimensions of teaching, most Instructional Designers have not. However, "instructional design, like the practice of teaching, is a moral endeavor and attending to these moral dimensions through the 'formation of conscious' will lead to instruction that reflects a 'transformative' orientation" (Osguthorpe, Osguthorpe, Jacob & Davies, 2002, p.2). The transformative tradition seeks to change a student's relationship with self, others and his world. It is concerned with not only improving test scores but with changing the learner's thinking, ways of knowing, acting and being.

"When designers begin to worry about the ultimate use of the knowledge and skills they teach, they go beyond the realm of measurable outcomes. They begin thinking about individuals, and the transformative ways in which these individuals will benefit from the learning experience" (Osguthorpe, Osguthorpe, Jacob & Davies, 2002, p. 10). Green (1999) identifies five consciences that need to be developed by teachers and ultimately by anyone involved with education. They include a "Conscience of Craft" or adhering to the highest standards within one's profession, not for the sake of profit but for excellence. A "Conscience of Membership" is a sense of loyalty and obligation to one's profession. Green explains, "professions are always practices in response to some fundamental human need or social good whose advancement is already a moral aim" (p. 79).

Another conscience is "Conscience of Sacrifice" or telling truths and keeping promises. It is going beyond what is required and sacrificing time and effort in behalf of another. It is caring more for the person than the product. It is caring for the person as an essential living element within a system of learning. The fourth conscience is "Conscience of Memory." This involves drawing upon the past and building upon traditions. The last conscience is "Conscience of Imagination." This refers to one's ability to envision and form the world anew. It involves dreaming and seeing things as they could be and perhaps should be and not accepting things as they are when they need to change for the betterment of society. It is creatively seeing alternative ways of designing and teaching.

Instructional Technology and Social Change

My years as a teacher have taught me that the teaching-learning matrix can be a very powerful synergistic force for transformation when the teacher and the learner or learners, in any setting, with or without complex technological devices, are unified toward a positive learning experience. When education engages both the student and the teacher, change can be exciting, dramatic and at times unexpected. This is especially true when all of the individual elements of technology and consequential teaching combine in a great and wonderful gestalt.

Media productions, instructional models and technological processes have had a powerful influence upon society. Skilled, charismatic designers, producers and instructors are able to control, manipulate and persuade whole nations and have, in some

cases, changed the course of history. The result of the televised Kennedy-Nixon debates in 1960 illustrates this fact. I believe that without strong underlying principles to direct the design and development of instruction and technology, based on firm moral foundations and purposes, our children, society and world stand in jeopardy of being damaged. Unless we take the time and effort to research the effects of media, technology and different modes of instruction and their interaction, we may be thoughtlessly injuring future generations and ourselves intellectually, socially, emotionally and morally.

Today's youth are living in perilous times. This is not because of world conflicts or national threats of terrorism but because of imprudent design and unwise use of technology. In this day and age production crews shoot six hundred hours of film, then edit it to seven hours or less of viewing time and call this "reality." Children grow up with pictures of models that have been air brushed, then published as natural photos rather than false images. Wrinkle removing injections, medications and creams, plastic surgery, liposuctioning and stomach stapling have all become essential elements for some in Western and affluent societies. These products and procedures are flaunted by the media as normal and acceptable, while the majority of the world's population struggle to find enough to eat to stay alive. In countries like India the dead, emaciated bodies of adults and children are placed in the back of trucks each morning like garbage is in urban communities of the U.S.A. and Canada. Yet most children and adults in our society live without any idea that there is a world beyond their home or neighbourhood, computer game, favourite sitcom and "reality" show. Too often deeper issues of integrity and social affect take a back seat to money, individual egos and thoughtless industries. In too

many homes unsupervised, senseless media have become the baby sitters, the parents, and the teachers.

Making Informed Choices

Far too few schools prepare children to be critical, discerning thinkers in order to live in societies saturated with so much distortion and high stimulus games and productions. Most children in Western and affluent parts of the world have become innocent victims of the media. They play for hours with computer games, watch meaningless television programmes, and then go to movies that contain little or no moral substance. How can they survive with these twisted tales and images of life unless they are taught to differentiate between reality and illusion, between moral dimensions and materialism? I believe much of the violence and immorality portrayed on the big screen is reflected in the lives of many individuals and families. Countless marriages have been weakened or destroyed by addiction to explicit visual material accessed on the Internet and viewed repeatedly in magazines and movies. Worthless metaphors continuously bombard immature, impressionable minds.

> In a recent article of ***The Christian Science Monitor***, the author writes that,
>
> at one point of the spectrum are coalitions such as the Alliance for Childhood, which has called for a moratorium on computers for students in early childhood and elementary schools. Concerns range from health issues to the need for stronger bonds between children and adults and more hands-on, active play in learning.
>
> At the other end are educators and technology enthusiasts, who believe that the use of computers at an early age – even when led by an adult – can open a child's mind to ideas and concepts that will kindle a great desire for learning, and perhaps make a child "smarter"

Parents and guardians stand somewhere in the middle.

> Many parents, who brag that their not-yet-3-year-old can type his or her name on a keyboard to enter a computer game, also admit to a grudging guilt that they did not instead send that same toddler outdoors to explore the wonders of blooming crocuses peeking through a layer of snow (Irwin, 2003, p.p. 1-2).

According to the National Center for Educational Statistics, 80% of eighth graders in the U.S. have access to a computer at home. Nevertheless, the debate continues whether computer use is advantageous or even safe. Some teachers believe that "adding technology to the mix only makes a great teacher even better." Still other educators contend that students need "to get to know the world on a firsthand basis" (Irwin, 2003, p. 2). Teachers for the gifted and the physically disabled extol the benefits of computer software that allow their students to have virtual experiences and greater ease of communication. Yet these same teachers, without adequate measurements and research data, discontinue word prediction software use for fear that their students will never learn to do things "the right way." Yet do we know what the "right way" is?

How does this relate to Instructional Technology in the twenty-first century? Both teaching and technology are key players in the transformation of education and society. However, sound research and underlying principles of design and instruction based on established and verifiable standards of practice need to be used in the learning environment to protect learners of all ages, but especially the children. Nevertheless, this is not enough. We may be in jeopardy of doing great harm or destroying ourselves intellectually and morally out of ignorance or greed if we do not think about all dimensions of learning and technology. "Do no harm" is the oath taken by physicians. It also needs to be the oath taken by every teacher and designer. We are in the business of

connection and change. We are part of the technologies that we create and an extension of them. It is our moral obligation to shift our frame of reference from objects and outcomes to human development and transformation. Processes and volition are human qualities and endeavours that include education and design. They are technologies. Within this definition each of us is an intricate living system and technology.

CHAPTER V

VARIOUS ASPECTS OF INTELLIGENCE

A heart I need for a son, a soul I need for a son, compassion I want from my son, righteousness, mercy, strength to suffer and carry pain, that I want from my son, not a mind without a soul!
Potok (1967, p. 264)

Education of the Heart

Education of the heart has become a popular phrase in Japan after May 1977 when a boy in junior high decapitated an elementary school boy, then mounted his head on the entrance gate of the boy's school. The boy who committed this horrendous act of violence left a note: "This is my revenge upon compulsory education and the society that has made my existence transparent" (Saito, 1998, p. 1). The boy was deemed mentally ill. Even so, the incident caused much concern among educators in Japan. As a result of this atrocity the Ministry of Education of Japan devised an initiative called "the education of the heart." This plan included:

1. Discipline, child care, and communication between parents and children at home,
2. Field trips and volunteer activities in communities, and
3. Moral education, counselling, and student guidance.

The members of the Teacher's Union of Japan voiced their concern with this proposal, believing that it may "be linked to a conservative movement toward national identity." However, the Education Ministry was determined to do something about the

disregard for social norms and the value of life among Japanese youth. According to the Ministry,

> the major goal of the education of the heart is to reinforce moral rules and ideals in order to deter immoral and asocial behavior by children." Yet, "in contemporary Japanese culture, education has often meant social training for a narrowly defined goal, such as economic success or entering into a prestigious university . . . Can the heart be another object of goal-oriented training? (Saito, 1998, pp. 1-2).

Many have questioned the motives, efficacy and morality associated with legislating educational programmes to improve moral and social behaviour. Yet in light of current events most developed nations throughout the world see a need to do something to reverse the trends toward violence and other asocial conduct.

At what point do we begin to educate the heart? A foetus begins to hear environmental sounds between 26 to 30 weeks of development. The sounds from within the womb consist of internal and external noises. The beat of a mother's heart, the swishing of amniotic fluid, the tones of human voices, music, media, and the entire environment are either cacophony or harmony to an unborn baby's ears. Even a child who is born deaf has felt vibrations while in the womb. What are these babies learning about their family, their home, their culture and their world even before birth? Should we be more cognisant and concerned about how we speak and interact with one another, the music and the programmes we listen to and the atmosphere we create and live in prior to a child's birth? Many researchers (Faienza, 1994) believe that we should. Studies conducted on newborns show that they respond to the voices they were most familiar with, the music they heard most often and the television programmes watched most regularly in the home prior to their birth. Thus, as we educate our children, we need to

make well informed and wise decisions about the influences that are allowed into their worlds, especially during formative years.

Even some constructivists, despite their concern for the rights of the learner, find themselves in a philosophical dilemma as they recognize the need for social restraint.

> As Justice Holmes made clear, the right of communities to safety, social justice, or a healthy environment may, under certain circumstances, transcend the right of an individual to cry fire in a crowded theatre . . . The debate lies at the core of democratic discourse and rapidly expands from the classroom to the legislative chambers . . . we seem tangled in a Gordian knot of 'rights talk' in which the competing rights of one group seem destined to be trumped by those of another (Mezirow, 2000, p. 119).

The problem seems to lie in the fact that there is a fire in the theatre and yet we continue to debate whose rights need to be protected while the flames and smoke encircle us.

The heart is the core or centre of reasoning. It is the integrity, the intent and the essence of an individual's nature. It includes all facets of the intellect, and reflects their design and motivation. Moral and character development are both part of the heart's wisdom and understanding. These virtues, however, cannot be legislated by governments nor taught in classrooms, only modelled (see Osguthorpe, 1996). The heart is the centre of an individual's desires and integrity, the culmination and integration of one's experiences and development. When the heart is pure and eager, it seeks truth and opportunities to serve others. It honours and respects the worth of others and seeks to do so in peaceful and loving ways. One who has a pure and courageous heart is the personification of magnanimity. All virtue and decency flow from a magnanimous heart.

Letting Respect and Love Connect Us

Many agree that the ultimate answer to our societal challenges lies in greater interdependence and deeper respect for one another. "If a teacher is ever allowed into the private, sacred realm of a child's heart, where lasting changes take place and lasting imprints are made, a sensitivity to the inner spirit of each child and a reverence for teaching moments is required" (Kapp,1978, p. ix). For some this means developing communities of learning or communities of truth; others advocate transformation of individuals and society (Banathy, 1991, 1995, 1996; Palmer, 1997a,b, 1998; Saito, 1998; Mezirow, 2000).

I remember a few years ago visiting my brother in Colorado. He was the assistant Provost at Colorado State University at the time. My brother is agnostic, and his wife is Anglican. Their daughter has not had any religious training. As we sat down for supper, my brother asked if I would like to ask a blessing on the food. Since I was a guest in his home, I had decided earlier to ask a silent prayer. His invitation to pray was a courtesy which I very much appreciated. However, before I was able to say anything, my niece jumped into the conversation and asked if she could offer a grace. She had memorized a prayer and had never had the opportunity to use it. My niece took a couple of minutes to bring the words back into her memory. Then she shared a short and very beautiful expression of gratitude. No one was offended, and all were edified by the experience. Our love and respect for one another made us open and generous on this occasion.

"Great thinking in any field at its deepest and best is a connective activity, a community-building activity, and not an activity meant to distance and alienate us"

(Palmer, 1993c, p. 9). Barbara McClintock, a geneticist who won the Nobel Prize in her early eighties for her contributions to science, described her relationship to the ears of corn that she studied as a "leaning into the kernel," or in other words developing a feeling or relationship for the corn. Her biographer wrote that "Barbara McClintock practiced the highest form of love: intimacy that does not annihilate difference" (Palmer, 1993b, p.4). This, I believe, needs to be at the "core" or heart of education: the courage to feel for one another and in the process learn and develop as noble members of a grand global humanity. It is what I have referred to as a vision of excellence from a system of magnanimity. It is education that holds all individuals, learners and their beliefs in high esteem while helping them to develop intellectually, morally, socially, emotionally and physically to meet the demands of life. It is a vision and system that values the worth and potential of each and every human being.

The Many Dimensions of Intelligence

Historically, western society and western educators have stressed a linear, one-dimensional approach to instruction and learning perpetuated by linear-type assessment (Bartendale, 2002), administered locally and nationally using uniform means and conditions.

> Many researchers now feel that intelligence may have been defined too narrowly and that it is a far more flexible/plastic phenomenon . . . In fact, these researchers now are looking at intelligence as a capacity that can be enhanced and amplified, something that is continually expanding and changing throughout one's life! (Lazear, 1992, p. 8).

Additionally, Levine (2002), a paediatrician and educator, has developed a battery of tests to assess the neurological wiring of a child in order to be able to overcome weaknesses by accentuating strengths and gifts. I believe that a multi-dimensional view of learning is vital and a pluralistic outlook of intelligence essential.

Gardner (1993) identified seven different intelligences and in the future he thinks that more may be added to this list. Gardner's seven intelligences include: 1) Linguistic Intelligence or the ability to use language well, 2) Logistical-Mathematical Intelligence or math and science ability, 3) Spatial Intelligence or the ability to form mental models as well as the ability to manoeuvre and operate these models, 4) Musical Intelligence, 5) Bodily-Kinaesthetic Intelligence or the ability to solve problems or fashion products using all or part of the body, 6) Interpersonal Intelligence or the ability to understand people and what motivates them and how to work cooperatively with them, and 7) Intrapersonal Intelligence or the ability to turn inward and to form an accurate model of oneself and to use this model to operate effectively in life.

I also believe that there are multiple dimensions to intelligence and intellectual development. These dimensions include the physical intelligence involved with the way our body systems communicate with one another, the gross and fine motor coordination, and the unique wiring of our neurological pathways. They also include moral, social, and emotional intelligence. Cognition, or thinking and reasoning, is still another intellectual dimension. An additional facet of intelligence is aesthetic appreciation. The integration of all of these "intelligences" into a congruent whole for the good of others is the function that I have attributed to the heart. Smith (1990) believes that referring to the heart in this way is only a figure of speech that is "useful, meaningful, but unrelated to physiological

or psychological processes (p. 10). He further believes that such words as mind, wit, emotions, feelings, heart and other general terms cannot be "the basis of theoretical formulation or instructional programs" and any "psychological or educational tests based on such arbitrary and ill founded conceptualizations can only be misleading and dangerous" (p.p. 10-11). Nevertheless, without any other term to describe this integration and centre of congruency better, I will take the risk and continue to refer to it as the heart.

However, I do agree with Smith (1990) that we need to understand the physiological and psychological processes involved in learning. Without a clear understanding of how the brain functions and is wired within each individual, we may demand performance and results that undermine the capabilities and futures of our children (Levine, 2002). Without teaching the entire learner, we may instruct with information and leave the other facets of the intellect, especially the emotions, untrained and unprepared for the stresses and dichotomies of life. It is important to understand that there are different styles of learning and more aptitudes than logistics and linguistics.

Education of the Intelligence

Education of the intelligence does not consist of only presenting information, but also requires teaching individuals how to think well in integrated and congruent ways. Meta-cognition abilities need to be taught in order to help individuals think more about thinking. When we comprehend more clearly how we think and the many dimensions involved with reasoning well, we are able to uncover personal thought distortions and incongruities. I believe that as long as we continue to under-educate the emotions and

morals and over-emphasize the education of selective dimensions of the intelligence, we will remain a world at risk.

According to Goleman (1994) we live in an emotionally out-of-control world where primitive, uneducated emotional responses undermine our thinking. He explains, "when passions surge," the balance and coordination of the emotional and rational minds tip; "it is the emotional mind that captures the upper hand, swamping the rational mind" (p.9). The uneducated or untrained mind sees things in more subjective, intuitive and emotionally driven ways (Palmer, 1993b). Yet, "these modes of knowing do not manufacture a world to be held at arm's length, manipulated and owned" (p. 2). Whereas, the analytical, scientific mind demands facts and proof that are objective and measurable, devoid of emotional speculation and conjecture. Developing sound minds means finding a healthy balance between purely subjective and objective knowing.

When we turn on the news, we hear of terrorism, of war and conflict throughout the world and of discord and hostility in homes, neighbourhoods, communities and nations. On the highways there is road rage, in the air there is air rage; and in our homes there are verbal and physical abuse and more raging. It is difficult to find peace and harmony. Sometimes events may shake the world from its anger and cynicism temporarily. However, too often, as soon as distance separates the events and memories, old patterns of behaviour seem to resurface. These are symptoms of an emotionally and intellectually immature world.

Data obtained from linguistic and logistic based IQ scores indicate that only 20% of the success in life can be contributed to ability in these areas (Goleman, 1994). According to Goleman even Gardner's multiple intelligences theory leaves unexplored

the idea of intelligence in emotions and how intelligence can be brought to the emotions. Goleman believes that the closest Gardner (1993) comes to this concept is in his Interpersonal and Intrapersonal Intelligences. However, even these, he explains, are more meta-cognition awareness of mental processes than emotional abilities. Goleman argues that any model of the mind is impoverished if it does not include the emotions.

Emotional Literacy

Goleman (1994) explains that there are five domains of emotional intelligence: 1) Knowing one's emotions or self-awareness, 2) Managing emotions appropriately, 3) Motivating ourselves, including being able to delay gratification and achieving a state of "flow," 4) Recognising emotions in others and having empathy, and 5) Handling relationships by managing the emotions in others and having social competence. He describes the emotionally literate as being able to understand the link between their thoughts, feelings and actions. They have the self-awareness to be able to assess their personal strengths and weaknesses, to manage their emotions and to take responsibility for them. When we are emotionally literate, we are less likely to rationalise, react and defend our intellectual positions. Instead, we remain open to the ideas and perceptions of others and seek to enter into meaningful relationships with them. Truth and integrity guide our heads and our hearts to seek cooperative, non-aggressive ways to resolve conflicts. We see all people, experiences and things as interconnected and worthy of our respect (Gottman & Declaire, 1997).

Logic alone is insufficient to make good decisions. When individuals attempt to repress emotions in order to deal with them, the brain learns to filter information in order to avoid any disturbances. This is seen especially in individuals suffering from posttraumatic stress disorder. Thus, the emotional mind in times of distress can over-power the rational mind and cause thought distortions. Our emotions need to be educated and developed as well as our intellectual, rational mind. Goleman (1994) states that "learning doesn't take place in isolation from . . . feelings. Being emotionally literate is as important for learning as instruction in math and reading" (p. 262).

For years, scientists and teachers have favoured a reductionist model of taking things apart to comprehend the whole. Memorising facts, defining and isolating variables have dominated the educational process. Scientists have attempted to comprehend life by simplifying and reducing all knowledge to building blocks and individual ingredients. Nonetheless, most learning is not simple and linear; rather it is complex and spiralling (Bateson, 1994; Wheatley, 1992). Facts do not teach a student how to make decisions or how to think. Too often in our schools subjects are taught without context and isolated from real life. In the process of taking things apart we frequently lose the synergy and the gestalt that gave life and meaning to that which we were analysing.

When baking a cake, sampling the individual ingredients will not allow us to appreciate the finished product – either its taste or appearance. Eggs, oil, flour, baking powder, sugar and butter may all be essential ingredients in the recipe, but taken individually they may distort our experience of the final creation. However, when each ingredient is carefully measured and mixed into the batter at the proper time and way, the product is enriched. Baking, experience, artistic decorating and a large measure of love

further increase the success and beauty of the cake. In a similar manner, the individual notes of a musical composition will not reveal the beauty and power of Beethoven's symphonies. Although there would be no whole without the individual pieces, it is only when all of the pieces are brought together in an ordered and orchestrated way that their greater merit is revealed.

Humour and Hope

"He must be a fool who cannot at times play the fool, and he that does not enjoy nonsense must be lacking in sense" (Rolfe, see Kapp1978, p. 23). Laughter and humour are good for physical, emotional and intellectual development. Laughing can assist us to think better. It can broaden our mental associations and creativity, which in turn enhance our ability to solve problems. Besides a cheerful heart, nurturing an attitude of hope provides resiliency. In research studies, hope has been found to be a better predictor of grades and success on scholastic exam scores than IQ (Goleman, 1994). When hope is present, individuals can bear up even when the going becomes very difficult. It provides determination and courage to set higher goals, then to work hard to achieve them. Individuals with high levels of hope are self-motivated, resourceful, flexible, optimistic and able to break large tasks down into smaller, manageable parts. Those who have realistic optimism also do better in the long run scholastically and socially. They have a strong expectation that things will eventually turn out right despite setbacks or problems (Hubble, Duncan & Miller, 1999).

Empathy

Another predictor of success in school and life is empathy (Goleman, 1994). Bateson (1994) would like to see empathy as a way of knowing and learning. Empathy is built through awareness and connection with others and self. The more open and honest we are to our own emotions, the more skilled we become at reading the emotional states of other people and vice versa. The way parents discipline and teach their children will either increase or decrease their children's ability to feel for and with others. Feelings are generally subject to cultural rules and need to be understood by those from different cultures through interaction and empathy. The closer the connection between individuals, the greater the synchrony and mirroring of emotions that will occur (Bateson, 1994). Powerful performers and leaders have the ability to synchronize with large groups. Empathy draws us together in community and opens us to the power of love. Love "calls us" to involvement, cooperation, and accountability (Palmer, 1993a). It has a tendency to unite, to heal and to create community.

Communities of learning should emphasise and validate the worth of each and every individual within the community. In the adult world we are quick to acknowledge different learning styles and accept various personalities if they endorse and support our cause. These same accommodations and considerations need to be given to all learners of all ages, no matter the setting or the monetary compensation. Individual worth and unique neurological wiring are essential considerations in education (Levine, 2002). As Gardner said, in an ABC special report in 1993, "it is not how smart you are but how you are smart that matters." We need to celebrate the unique gifts and abilities of every child.

Levine (2002) hopes that education will fortify "personal strengths and affinities sufficiently while providing broad exposure to the diverse realms of knowledge and skill" (p. 335).

Assessment

Most often formal scholastic testing, first developed in 1900 by Alfred Binet and his colleagues, evaluated intelligence in subjects that were most easily quantified. The assumption underlying this testing was that intelligence is an inherent trait that can be measured early in life, changing little due to either environment or education. Research studies in recent years comparing success in life to Intelligence Quotient (IQ) scores, however, have brought this assumption into question (Gardner, 1993; Goleman, 1994; Gottman, & Declaire, 1997; Lazear, 1992).

Furthermore the concept of multiple intelligences has challenged the linear view of testing and education (Gardner, 1993; Lazear, 1992; Levine, 2002). Objective questions used in scholastic exams assess facts and figures, especially those relating to linguistics and logistics rather than real life reasoning and judgment. Subjects that are more difficult to quantify by uniform evaluation are less valued. This is especially true of the arts, which are considered more closely related to the educating of the emotions.

Gardner (1993) believes that contextual and individualized assessment and schooling are needed to properly assess intellectual ability. He states that "many members of Mensa" (an international high-IQ society whose members are in the top 2% of the population) "are expert in nothing – except in taking tests of intelligence"

(Gardner, 1993, p. 53). Children and all learners need to be taught in the home, in school and by society that IQ is only a small part of being intelligent, and that generosity and nobility of spirit are important aspects of an educated man or woman.

Nobility in a magnanimous system does not refer to elitism, snobbery or superiority due to inheritance, privilege or ability; rather it is a refinement of character and principle that values the worth and the strengths of others. When the attribute of nobility is applied to assessment, it is reflected in the evaluation of strengths and uniqueness rather than weaknesses and conformity and in helping the learner to compensate for weaknesses through the use of his strengths.

Levine (2002) believes that "no uniform 'product' will ever flow from the pipeline of education. Instead, schools . . . are producing a diversified assortment of human beings" (p. 335). He shares how on numerous evenings he has driven home emotionally drained "after listening to sad tales of children who have come to equate education with humiliation. Many of them have been forced to accept labels for themselves, labels that mark them somehow permanently deviant or dysfunctional" and many of them "have been seriously wounded by the current testing mania . . . Their identity has been shrunken down to a list of examination scores" . . .that shed "little light on their true strengths, weaknesses, and educational needs" (p.14). Methods of assessment in a magnanimous system would not demean nor label learners, nor would they be used to inappropriately compare learners with the strengths and abilities of others (Asimov, 2003; Lopez, 1996; O'Neil, 2002). When standardised norms and values are employed, they will be guides for teaching rather than measurements of worth, capability or potential.

CHAPTER VI

TRANSFORMATIONAL AND TRANSCENDENT EDUCATION

The wild little creature of two weeks ago has been transformed into a gentle child. She is sitting beside me as I write, her face serene and happy, crocheting a long red chain of Scotch wool. She learned the stitch this week, and is very proud of the achievement . . . The little savage has learned her first lesson in obedience, and finds the yoke easy. It now remains my pleasant task to direct and mould the beautiful intelligence that is beginning to stir in the child-soul.
Helen Keller (1980, p. 268)

Too often we accept others' identity of us rather than developing our own. Our identity is formed by our experiences and the expectations of those in our families and culture. According to Bateson (1994) today's schools are hard on personal identities. She asserts that schools are violent against self, and they often strip away the dreams and undermine the confidence of children. Child-like curiosities and freedom of expression are damaged by teachers who focus on tasks rather than processes. Palmer (1993a) also believes that traditional education does not strive "to locate and understand the self in the world, but to get it out of the way" (p.35). Since our concept of self is pivotal to our success in learning, helping children to develop strong, clear personal identities is essential to the stability and progress in their own lives and in their communities. Stability, however, is not found in sameness and compliance, "by finding the right form and insisting that everyone fit into it." Instead, "it is individual freedom that creates stable systems" (Wheatley & Kellner-Roger, 1996, p. 41).

Transformational Education

Transformational learning has been defined as profound shifts in one's frame of reference. These changes or shifts in epistemology or one's way of knowing are usually developmentally related. They are believed to occur because of developmental changes within an individual and as a result of external conditions relating to the social and cultural environment and their forces. Most transformations come about over a period of time rather than the result of one occurrence (Mezirow, 2000; Kegan 1994).

Transformational learning does not just "inform" with facts, dates, events and data, but it changes the learner's perception of self and others. It increases a sense of worth and capability while motivating more change and more learning. It emphasizes the "why" and "how" of learning. It is communal and synergistic in nature, seeking to find meaning as part of the community and the world. It searches for the good for all and does it through critical and continuous inquiry and reflection.

Instructional Designers have conventionally followed a 'mimetic' tradition or one that is concerned with the transmission of facts, information and procedural knowledge. The ADDIE model (which includes analysis and testing, design and development, implementation and evaluation) is part of this mimetic practice (Jonassen, 1999; Kruse, 2002). Behavioural psychology has required measurable results and objective outcomes. In many cases with Instructional Design the learner or customer has been reduced to a thing in the process to evaluate and manipulate. Nevertheless, all human endeavours are human, moral endeavours, and this includes activities of design. Instructional Designers and Instructional Technologists must put the learner first and his transformation as a

priority (Green, 1999; Osguthorpe, Osguthorpe, Jacob & Davies, 2002). Everyone who is involved with the technologies of learning is involved with the transformation of humanity.

Research in the area of transformational learning reveals that critical reflection is an important part of the process of change. For Mezirow (2000) transformational learning also involves reflective dialogues with others, which involve emotional, social and cognitive elements. Learning that brings about real, sustained change, whether in the traditional classroom setting, in the field, on-line through distance education, or through life experiences requires the engagement of the entire individual. It is the attentive and genuine teaching of the whole person within the context of community. People who feel safe and free to voice their opinions honestly without harsh criticism in an atmosphere of understanding and acceptance experience transformation more easily (Fogel, 1993; Rothman, 1996; Mezirow, 2000).

Relationships help us to develop a sense of self. Studies have shown that significant others in children's lives, such as adults, teachers, youth leaders, business people and clergy, who see something unique in a young person and who encourage a profound sense of purpose within him, contribute to a sense of personhood. In early and later adulthood, mentoring communities of friends and colleagues provide the same shaping influence upon an individual's values and commitments. Acting upon goals and beliefs through work and service helps to further solidify identity and transform the learner (Mezirow, 2000).

Transformational learning requires effort on the part of every individual; it involves reflection, meaningful and respectful dialogue and mentoring communities.

When learners of all ages have opportunities to apply themselves through work and service, what is learned about others and themselves can gel and take on greater meaning (Mezirow, 2000). Transformation is a process of interdependence that involves the entire global family and one's whole self. It entails cognitive development and epistemological shifts or changes in frames of reference.

Transcendent Education

While transformation involves change in one's way of thinking, transcendence involves less known paths of knowing and being. In Eastern traditions transcendence is obtained through altered states of mind and body. Meditative practices and yoga attempt to attain "higher states" of oneness through relaxation, mantras and body positions. Greater feelings of peace and love are often associated with these meditative approaches to transcendence. However, I believe that transcendence is possible without entering into altered states of being. It does require, though, a high degree of integrity and congruency. Decreasing negative, unnecessary stress and conflict within and without our systems will allow transcendence to occur more easily and more frequently.

Magnanimity directs one's focus to the good and happiness of others. In a magnanimous system, it is easier to transcend self to serve others and to receive pure knowledge for the benefit of all mankind. In Maslow's hierarchy the central concern is meeting personal needs in order to progress to other levels of development (Maslow,1998). The highest level being self-actualisation. In a vision for excellence

approached from a system of magnanimity self is actualised through love and concern for others. Like Frankl (1984), I believe

> the more one forgets himself – by giving himself to a cause to serve or another person to love – the more human he is and the more he actualizes himself. What is called self-actualization is not an attainable aim at all, for the simple reason that the more one would strive for it, the more he would miss it. In other words, self-actualization is possible only as a side-effect of self-transcendence (Frankl, 1984, p. 133).

Transcendence is not only involved with cognitive processes and change in knowing and perceiving, it is also concerned with a profound sense of unity and oneness with others and with all life. It is a magnanimous self that loves purely and with complete integrity no matter the circumstances. Transcendence is manifested in one's attitude, language and actions. It is love and peace personified.

Transformational learning and cognitive development may prepare one for transcendent experiences. However, transcendence is not always dependent upon cognitive processes as illustrated in children who at times are capable of speaking words of wisdom far beyond their developmental years or experience. Even so, generally as thinking and values become more attuned to the good of others in pure love and respectful consideration, we transcend the mundane and commonplace. This sort of transcendence is demonstrated in the lives of exceptional individuals who forgo self and personal comfort to assist and comfort others. Frankl (1984) remembers the men in the concentration camps "who walked through the huts comforting others, giving away their last piece of bread." Frankl says that these men

> may have been few in number, but they offer sufficient proof that everything can be taken from a man but one thing: the last of the human freedoms – to choose one's attitude in any given set of circumstances, to choose one's own way

> . . . the sort of person the prisoner became was the result of an inner decision, and not the camp influences alone (pp. 86-87).

These are the individuals on September 11, 2001, who made the decision to assist others to safety while sacrificing their own lives. It is the man who, in the icy waters of the Potomac River, helped near-drowning passengers get to hovering helicopter lifts, then quietly slipped away into his watery grave.

Western mechanistic, rationalistic thought and research have not ventured far beyond the confines of cognitive development. Even near death experiences, miraculous healings and other difficult to explain happenings are explained as purely neuro-chemical phenomena or abnormal physiological occurrences. I believe that the body and brain are involved; however, more studies are needed before any definitive conclusions can be reached, realising that "how we conceptualize what is possible enhances and limits our individual and cultural development" (Miller & Cook-Greuter, 1994, p. xvi).

In Instructional Technology we know that there is a realm of knowledge and experience that cannot be reduced to tangible objects for storage and retrieval (Hildreth & Kimble, 2002); it is within this realm of duality that more understanding and acceptance is needed in order to comprehend man's full potential for learning. Whether we believe transcendence is a spiritual or a higher cognitive reality, the fact remains that it is experienced and demonstrated by many who strive to make this world a better and more benevolent place to reside.

Even if transcendental experiences and learning are, as Kohlberg (1981) describes, only subjectively meaningful and unverifiable, if they make us magnanimous people, then these experiences should be considered a valid part of the learning process.

Though primary sources of data may not exist, many subjective reports and examples do. Perhaps someday, when research methodologies are refined and sophisticated enough, even science will have adequate information to validate both the transformational and transcendental dimensions of learning. In the meantime, magnanimity may provide a door through which we can approach and experience transcendent learning.

CHAPTER VII

AN INTEGRATED AND CONGRUENT APPROACH

If you divide a hologram, each part shows the whole image. . .As you continue to divide up the hologram, no matter how small the divisions, each piece still shows the whole image. Senge (1990, p. 12)

Rather than departmentalizing knowledge from within a discipline, principles from all fields should be examined, evaluated and applied to the design and development of Instructional Technology. In this chapter I present findings and insights from medicine, music medicine and psychology to illustrate the need to integrate the research and learning from other disciplines. If we are to educate a refined and wise people, the answer to the question "How?" may lie within a holistic approach.

"The designers and perpetrators of Auschwitz, Dachau, and Buchenwald . . . were the heirs of Kant and Goethe . . . but their education did not serve as an adequate barrier to barbarity" (Orr, 1994, p. 1). As Wiesel (1990) observed concerning the German education system, "It emphasized theories instead of values, concepts rather than human beings, abstraction rather than consciousness, answers instead of questions, ideology and efficiency rather than conscience." Unless we understand whom we teach, the developmental stages involved in learning and the various dimensions of the intellect, we may continue to educate minds rather than wholly developed, sensitive, congruent, caring individuals.

Looking from Other Perspectives and Disciplines

Medical Insights

The body is a complex system made up of numerous other systems all communicating and working together to sustain and maintain life. If the body is unable to function as a unified organisation, or if any one system within the body fails, the whole organism suffers. The most effectual learning is dependent upon all of these various systems operating and communicating as one.

The central nervous system (CNS) has two major divisions, which include the brain and the spinal cord. The brain is a multifaceted organ consisting of three major divisions and billions of cells. Neural communication is the result of electrochemical interactions within the brain and throughout the CNS. The most primitive hindbrain section controls sensory-motor coordination and the basic life support of the body. The midbrain containing the undifferentiated reticular activating system (RAS) or regulatory system is involved with hormonal balances and other regulation. The forebrain or cerebral cortex is further divided into various lobes and sections separated by the corpus callosum.

Distribution of function throughout the cerebral cortex is dependent upon which side and the specific area of the brain that is involved. For example, the frontal lobe is responsible for specific motor functions, expressive language abilities, intellectual function, personality, and memory relating to concentration, attention to detail and motivation. Damage to the frontal lobe can cause a lack of motivation and initiative, diminished spontaneity and disregard for social amenities, inappropriate laughter

accompanied by excessive silliness and emotional instability (Bigler, 1984; Foster, Eskes & Struss, 1994; Van De Graff, 1995).

It is important to understand that each individual is an intricate organism who has a unique combination of factors functioning together to make a singular personality and being. Both physical make up and life experiences can influence and in some cases determine how well a person is able to learn and cope. Levine (2002) reminds us that

> a child's school experience is known to produce actual changes in brain function and anatomy. That fact alone would suggest that educators and parents are not just influencing the thought processes of our children but actually helping to construct their brains. This also means we can damage these malleable minds when we misinterpret and therefore miseducate them (p. 307).

The interaction of the brain and other organs and systems of the body is complex, and much still needs to be researched and understood. Norman Cousins, the author of many mind/body publications including ***Anatomy of an Illness*** (1979), wrote about the capacity of the mind to influence the outcome of disease processes. While an adjunct professor at UCLA, Cousins studied the effects of positive beliefs and emotions on healing and being able to find meaning and purpose in chronic or terminal illness. It may be impossible to avoid the negative in life, but we can choose to accentuate those emotions and thoughts that are constructive and uplifting. Cousins wrote about the miraculous healings and results that occurred when medical treatment and technology were complemented with positive thoughts and images. For those patients whose conditions were terminal or who would have to cope with life long limitations, finding meaning in suffering or death was as significant as a full recovery.

While serving as a health missionary in Mexico, I was responsible for teaching correct principles and practices of health to people steeped in false traditions, superstition

and folklore. Traditions that did not harm, though ineffective, did not need to be changed. For example, when a child had a respiratory illness, some Mexican mothers would put oil on their child's forehead and between his eyes. This practice had no known curative benefit according to Western medicine, other than perhaps a placebo effect, but it did no harm. Instead of telling caregivers that their traditions were wrong, I learned to add to these benign practices proven methods of healing. However, if I knew that the practice was harmful, I would teach the consequences of such techniques and would provide alternative ways to assist the healing process.

My experiences in Mexico taught me that having correct principles and tools is important, but gaining trust, and having good communication and genuine support for people within their belief systems were essential for change. Archaic and useless structures from an older, less effective system may have to remain for a time in order to provide a sense of security, as long as they do not interfere with the safety and overall vision of the new, improved structures.

The medical profession that prides itself on double-blind studies and strictly controlled research using the scientific method continues to employ many practices that have no known reason for healing. For years lobotomies were performed on the mentally impaired, and shock treatment is still used for the severely depressed. Even though "do no harm" is the oath taken by physicians, chemotherapy is often the cause of death in cancer patients rather than the cancer itself. Still, this is acceptable and considered a calculated risk that can be justified based on a benefit-risk ratio. The power of placebos is known and used in research trials and other research studies. But it has not been studied beyond alternative medicine as a means of healing. Despite the many research

studies that have been conducted and are being conducted, there is much still to be understood about the body and healing.

Dr. Albert Schweitzer (1875-1965) knew the power of the mind and the placebo. At his hospital at Lambarene in Africa, he saw those patients who were referred to him by the local witch doctor. For some patients the witch doctor administered herbs; for others he gave incantations; but for those with more serious problems like hernias, tumours or dislocations requiring surgery he sent them to the hospital to be treated by Dr. Schweitzer. Some of his steadiest patients were referred to him by the witch doctor. When Dr. Schweitzer was asked why he thought so many were cured by the witch doctor, he replied, "The witch doctor succeeds for the same reason all the rest of us succeed. Each patient carries his own doctor inside him. They come to us not knowing that truth. We are at our best when we give the doctor who resides within each patient a chance to go to work" (Cousins, 1979, pp. 68-69).

Much of medicine has moved from a hands-on, healing profession to a technologically superior, yet sterile discipline. We are able to repair bodies, but often we cannot completely heal patients. In March 2002 I attended a three-day conference in Salt Lake City presented by the Harvard School of Medicine's Mind/Body Institute and the George Washington University Institute for Spirituality and Health. St. Mark's Hospital hosted this conference. Herbert Benson (1976) and other presenters from diverse medical and spiritual disciplines shared their thoughts and expertise.

At this conference, authorities from Buddhist, Catholic, Christian Science, Islamic, Jewish, Latter-day Saint and Protestant beliefs presented their perspectives on healing. The emphasis was not on specific religious beliefs, but the necessity for

spirituality in general to facilitate complete healing. Dr. Benson's (1976) relaxation response was presented as a way to open avenues to spiritual enlightenment and healing for patients of any background. The consensus at this conference was that people need more than technology and technicians to heal. Doctors, nurses and all involved with the sick and the afflicted need to learn and appreciate the power that the mind, the body and the heart have when they work together in unity for the good of the patient.

> Religion and medicine have been closely linked for over 8000 years, and only within the past 5% of recorded history have they been separated. In 1910 Sir William Osler wrote in the ***British Medical Journal*** that 'nothing in life is more wonderful than faith – the one great moving force which can neither weigh in the balance nor test in the crucible.' Nevertheless, for the next 80 years, medical science would not seriously examine in any substantial manner the effects of religious faith on mental or physical health, nor try to understand its clinical relevance. In the final decade of this millennium, that is all changing (Harvard, Koenig, 2002).

Teachers and designers need to be aware of the powerful link between the mind and the body, between imagination and physiological states. They also need to know the developmental stages of learning for children and adults. Online experiences are very different for children (Kondracke, 1992; Martinez, 2002; Schaller, 2002). Some studies seem to indicate that younger users would benefit from servers especially designed for their level of understanding and development. In education the influence of hope and expectation are significant factors in learning success. These may be the placebos of the classroom setting. The strengths of the learner need to be accentuated and motivated for best results. We would never think of criticizing or demeaning patients for not healing fast enough or not using all of their abilities to get better. In the same way learners who may have unique neurological wiring and strengths should not be berated for their

distinct ways of accessing, retaining and using knowledge. Disgraphia may be compensated for by the use of technological tools rather than accentuated by rebukes.

Sensitivity for the worth and capacity of the learner is essential to allow the brain and all the body systems to work together to facilitate learning. An overly anxious child or adult may be too emotionally and physically inhibited to learn. Being creative and innovative as a designer and teacher may open doors and windows of learning for children and provide environments that are motivating and caring enough to facilitate success.

Music Medicine Insights

Historically music was used to alter moods, heal the body, and calm the soul of man. Music has a powerful influence upon human emotions and physiology (Pratt & Spintge, 1996; Spintge & Droh, 1992). It has been and continues to be a prevailing question whether the power of music lies within its structure, order, and form or within its vibrations and rhythms. It is not clear exactly how rhythmic patterns influence neurophysiology. It is still to be discovered whether music's great influence is due to emotional and cognitive associations, thereby resulting in neurochemical responses, or if the power and influence of music is a combination of all these and perhaps even more factors.

Research studies conducted at the University of California at Irvine (Rauscher, Shaw, & Ky, 1993; Rauscher, Shaw, Levine, & Wright, 1993; Rauscher, Shaw, Levine, Ky, & Wright, 1994) have shown that students who listened to 10 minutes of a Mozart

sonata prior to taking a test outscored students who did not listen to Mozart, and that music may affect spatial reasoning. Radocy and Boyle (1997), however, have cautioned against taking "the purported 'Mozart effect' and making it into something well beyond what it represents" (p. 375). Nevertheless, they do feel that this "effect" is real in limited situations.

The notion of music as medicine, or, in other words, music as a direct or adjunct medical intervention, is being researched internationally (Pratt & Spintge, 1996; Spintge & Droh, 1992). In ancient Egypt music was referred to as the "physic of the soul" (Podolsky, 1954), and in ancient Greece the sciences and "mousike" were studied together (Carpenter, 1958; Pratt, 1985). Mousike or music was a much broader concept for the Greeks, comprising other art forms such as poetry. The ancient Greeks seemed to comprehend the power of music.

Pythagoras, a sixth century Greek philosopher and scientist, believed that daily music making, either by singing or playing an instrument, helped the human soul to achieve emotional catharsis and health (Aristotle, trans. Jowett, 1899). Maconie (1997) explains that "the science of Pythagoras" was "a science of musical acoustics" and that "Plato's prescription for an ideal city state is based on a concept of music aesthetics derived from Pythagorean science" (p. xi). Plato and Aristotle both taught that listening to specific musical rhythms and modes (harmoniai) could influence an individual to be an asset or a traitor to the state. Censorship of certain modes and rhythms was advocated because of their subversive or destructive nature (Jowett, 1899; Plato, trans. Jowett, 1968). Since knowledge concerning the nature and form of these modes and rhythms

was not fully preserved, one can only speculate about what the Greeks knew and, through modern technology and research, strive to recover this information and understanding.

Boethius (c. 480 to c. 585) emphasised the importance of music in the medieval curriculum, which was organized into the seven liberal arts, in which music was included with geometry, arithmetic, and astronomy in the quadrivium. Boethius stated that, "the others (arithmetic, geometry, and astronomy) are concerned with the pursuit of truth, but music is related not only to speculation but to morality as well . . . The soul of the universe is united by musical concord" (see Levinson, 1994, p. 43). Nevertheless, Aristotle, who advised against too much musical training, felt music education should teach an appreciation for melodies and rhythms. Aristotle believed that the right balance or measure of music needed to be attained, which, to him, meant stopping short of professional contests. Plato, who also felt that a balance was necessary, taught that a balance of gymnastics and musical training was essential (Plato, trans. Jowett, 1968).

The philosophical, physiological, and psychological underpinnings of music continue to be examined (Capurso, 1970; Davies, 1978; Meyer, 1970; Radocy & Boyle, 1997). Functions and influences of music are multifaceted (Meyer, 1970; Radocy & Boyle, 1997; Skille, Wigram, & Weekes, 1989; Wallin, 1991). In 1896, Patrici, an Italian physiologist, demonstrated that soothing music slows the circulation in the brain and that energetic music increases blood flow and affects moods (Cook, 1981). Other studies have shown that music can effect changes in heart rate, respiration, oxygenation saturation of the blood, skin temperature, gastric motility, blood pressure, metabolism,

muscle tone, blood volume and other physiological functions (Kaempf & Amodei, 1989; Pratt, 1997; Sears, 1958; Slaughter, 1954; Steelman, 1990; Wilson, 1957).

Decreased pain and increased relaxation have been reported in studies where subjects have listened to music (Davis & Thaut, 1989; Fried, 1990). Documented reports have shown the simultaneous presence of listening to certain types of music and dysfunctional or antisocial behaviour (Harris, Bradley, & Titus, 1992; Müller, 1996; Stuessy, 1996; Wass, Miller, & Redditt, 1991). Still other research has demonstrated the influence of music on the activation of various parts of the brain (Ogata, 1995; Walker, 1977).

The effects of music on facilitating and increasing learning as well as spatial and cognitive development are also being studied (Konovalov & Otmahova, 1984; Rauscher, Shaw, Levine, Ky, & Wright, 1994; Rideout & Laubach, 1996). Some studies are investigating which musical rhythms and harmonies influence brain cells and the psychoneuroimmunological response, and which musical rhythms and harmonies bring balance and healing to the soul (Maranto, 1991). Still other research has suggested that there is different neurological processing within the brains of those who are musically educated compared with those who are not (Beisteiner, Altenmüller, Lang, Lindinger, & Deecke, 1994; Schlaug et al., 1995; Wagner & Menzel, 1977).

Neuroanatomical findings have shown that the corpus callosum of musicians tends to be larger than normal with differences greater in those who have been trained before 7 years old (Schlaug, 1994). Many of these findings have direct application to educational and technological design. The arts, and especially music, can influence neurological connections, learning ability, moral and social development. No

Instructional Technology programme would be complete without an understanding of the part the arts play in learning. Colour, lighting, music and aesthetics are only a few of the features from the arts that are critical to learning and to technological design and systems.

Clinical Psychology Insights and Common Factors

Empirical evidence is demonstrating the effectiveness of numerous psychotherapeutic approaches across various disorders (Bergin, 1971; Lambert & Bergin, 1994; see also Asay & Lambert, 1997). Lambert (1997) has stated that "research literature clearly shows that psychotherapy is effective in relation to no-treatment and placebo control conditions" (p. 2). The reasons for the effectiveness or superiority of these different interventions are still widely debated and poorly understood (Lambert, 1997; Lambert & Bergin, 1994).

Lambert (1992) conceptualised therapeutic outcomes as being the result of four elements: common factors, extra therapeutic changes, expectancy or placebo effect, and, finally, the specific technique used. A warm, supportive, trusting, empathetic, non-threatening relationship and environment seem to improve outcomes of all therapies. Often the supportive rapport developed between therapist and client is determined to be more important than the specific intervention used (Asay & Lambert, 1997; Gaston, 1990; Gurman, 1977; Horvath & Symonds, 1991; Horvath & Luborsky, 1993; Krupnick et al., 1996; Patterson, 1984). Since all therapies and interventions have similar common factors that can bring about successful learning outcomes, common factors alone may be sufficient (Hubble, Duncan & Miller, 1999; Patterson, 1984).

Other researchers, however, feel that both relational common factors and specific interventions are necessary to cause the desired changes (Garfield, 1991).

After extensive meta-analysis,though, success in the clinical setting seems to be attributed to "common factors." If these common factors were applied to the learning environment, they would include: learner strengths, community and relational strengths, the hope and expectancy that the learner brings into the setting, and finally the learning model or techniques used by the teacher. Applying Lambert's (1992) research findings on common factors to the classroom setting would mean that learning models and techniques are not as important to successful learning as are the strengths and relationships brought by the learner and others to the learning environment. These factors would include:

1. **The Learner factor or what a learner brings to the educational setting**. Learners bring personal strengths, talents, skills and abilities as well as beliefs, resources, life experiences and events to the learning setting. Two of the most important factors contributing to change and learning are the student and the support that the student perceives s/he is receiving from family and friends. The more that these support systems are encouraged and fostered the greater the likelihood of learning and change. This area accounts for 40% of the success for change and learning.

2. **Relationship factors or those relationships and community that are established and fostered in the learning setting.** Establishing good associations between the teacher and learner as well as the learner and

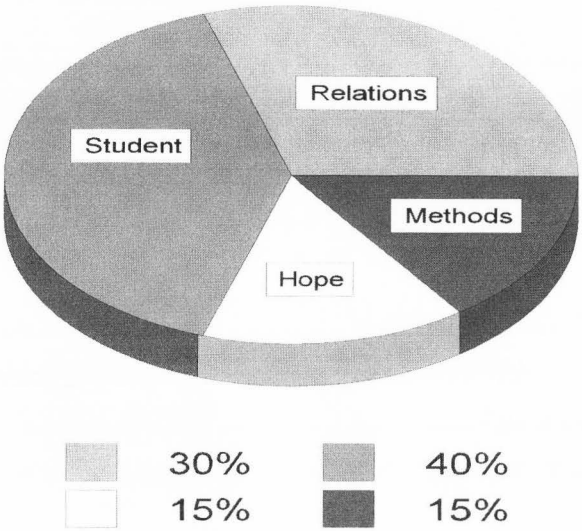
peers facilitates and increases learning. When students continually perceive that there are empathy, acceptance and warmth from those within their learning community, they will more likely be successful and achieve scholastically. This area accounts for 30% of the success for change and learning.

3. **Hope and expectancy**. The hope and expectancy that the learner receives through the teaching, the technology and the educator, that contribute to a sense of worth and that offset any demoralizing self-talk will promote change and learning. To increase a sense of hope the learner must feel she or he is capable of achieving: "I can do this" or agency thinking, followed by a way to accomplish the goal: "Here is how I can do this" or pathway thinking. This area accounts for 15% of the success for change and learning.

4. **The model or technique used to teach the subject.** Techniques and learning models can only improve teaching and learning and facilitate change if they are designed and based upon sound research, principles and practices. Nevertheless, whatever strategies and techniques are used in education, they account for only another 15% of the total success for change and learning.

According to Murphy (see Hubble, Duncan & Miller, 1999) adapting these factors to learning, as shown in figure 1, 85% of the success in learning would be attributed to the learner and relationships within and without the learning situation.

Figure 1. Common factors for success in a classroom setting. (Adapted from Hubble, Duncan & Miller, 1999)



Using "common factors" as an approach to learning and change within the learning community would mean that teachers and Instructional Designers would focus on those aspects of education and design that would enhance the strengths and the sense of worth within the learner. It would also mean that anything that increased the sense of community in the learning environment, whether this was in the home, school or business setting, should be implemented for the learner's sake and not to manipulate outcomes. Though learning and outcomes may seem to be to the same end, pure motives, I believe,

always produce purer and more far reaching results. Though these findings originated from a clinical psychology perspective many educators are beginning to think that learning systems and communities would benefit from applying these common factors in the classroom setting and to learning in general (Hubble, Duncan & Miller, 1999).

Integration and Congruency

Neither life nor learning is one-dimensional. Within each learner there are multiple processes that affect physical, aesthetic, kinaesthetic, cognitive, emotional, moral, and social development. These intrinsic domains and areas need to be integrated for optimal achievement. How these processes work together will depend on the individual's genetics and abilities to connect with self, others and technologies within the learning community and the entire learning environment. Our ability to find integration within ourselves is dependent on an understanding of the internal as well as the external influences working upon us. We are each closely connected to one another in many ways. Studies have shown that women in dorms will synchronize biologically and physiologically with the most dominant or "alpha" female in the group. Similarly, neurochemistry fluctuates because of group dynamics, as well as private thoughts. All of these influences and dynamics within a learning community have far reaching implications.

Children are attracted to "pretty" teachers and respond better to them, believing that they are smarter and kinder than plainer looking teachers. A mathematically designed template of beauty has been created. Men and women who fit most closely into

this template are more likely to be offered jobs and promotions before others whose features are considered less attractive. Most children are easily taught to be prejudicial and narrow-minded. Even 12- month-olds preferences and interactions can be influenced by what they watch on television based on the emotional information they receive from adults (Derbyshire, 2003). Besides all of these influences, there is the correlation of violence in media and aggression in society. Psychological factors are numerous and varied. Nevertheless, the more we are aware of them and their power, the more we can help liberate people from these illusions and false impressions and lead them to greater congruency of mind, body and heart.

Hostages are vulnerable to the Stockholm syndrome when they are threatened or enslaved by their captors. Are we a people bound and enslaved by the technologies and environments we have created in our homes, schools, and societies? We can learn much about our natures by observation and research obtained from many different disciplines. The more comprehensive our understanding is of the influences that help us to become whole and those that violate our integrity, the more likely we will appreciate, respect and love one another for who we are and not for who we think we are or should be. Learning to place the real worth of the individual above our limited understanding will allow a generosity of spirit to exist rather than one that harms or destroys (McCain, 2003).

When I was sixteen, my cousin and I were the targets of mob hostility on the part of a labour union. Both he and I were mature enough not to antagonise this crowd of angry people, especially when knives were brandished, the vehicle set on two tires and threats made. I still remember the mocking and the thick dark feeling that prevailed until these individuals reconsidered their actions and let us go free. I also remember thinking

to myself that this is unreal and these people must be watching too much television. But I held my tongue. When I looked into the faces of these individuals, I saw good people who were out-of-control.

This group was truly united in their cause, and their unity could be felt in a very tangible way. They were acting with one mind and were a powerful force. Nevertheless, their methods of achieving their goal were destructive and deadly. These individuals were like the terrorists, lynch mobs, gang members and racist groups who have acted rashly and maliciously to destroy life for very self-directed reasons. Such groups have sought integration by retaliation and revenge rather than by magnanimity, which embraces forgiveness and kindness. They have become their own law. Their thinking enslaves both themselves and others. Society cannot flourish or progress when associations are realised in such negative and cruel ways. If we do not think about our society and the many diverse influences within it, we may be a nation and world at risk for more reasons than poor grades on standardised examinations. Our learning communities need to free us rather than enslave.

The family is the basic unit of society and the first community of learning. Parents and caregivers create the first didactic environments. Since our physiological, attitudinal and emotional states are influencing and conditioning children, even from conception, unless everyone in a child's world is committed to modelling and teaching a more constructive, magnanimous model, the vicious cycle of anger and hostility will never be broken. Peace and love are the fruits of learning how to think, feel and act in more mature, generous ways and the harvest that comes from educating and integrating all aspects of the brain and being.

Integration is achieved through integrity. "People and organizations with integrity are wholly themselves. No aspect of self stands different or apart. At their center is clarity, not conflict. When they go inside to find themselves, there is only one self there" (Wheatley & Kellner-Rogers, p.60). As we interact with others and ourselves honestly, there are great amalgamating and uniting forces at work. These forces reveal ourselves and allow for greater refinement and transformation of all facets of our being. The result of this integrating process is congruency and at times transcendence. When our thoughts, words and actions are completely one with our values, purposes and visions, we have achieved congruency. In a magnanimous system, ultimate congruency is achieved when we are able to understand and consistently abide by universal laws and pure knowledge. The peace and love found through magnanimity liberate us and allow us to transcend the injustices and violence caused in part by incoherence, prejudice and narrow mindedness. It is a system that frees while it unites in clear and dependable ways.

CHAPTER VIII

LANGUAGE AND METAPHORS

With words we govern men.
Benjamin Disraeli (see Dale, 1984, p.102)

According to Smith (1990) the function of language is to communicate and it cannot be separated from thought. However, he notes that the uses of language "are rich and multifarious, imaginative, idiosyncratic, and evident – a continually revealing source of ideas and possibilities" (p. 108). Thought, language, images and narratives have the power to shape our perceptions and lives. Western languages, however, have a linear bias because of the way they are structured (Senge, 1990). This bias has an effect on the thinking and images of those who speak these languages. Postman (1995) explains that language has a social dimension that can either create, alienate or destroy relationships. In this way language can transform our world and ourselves negatively unless we realise how it influences thought and we are in command of it and use it carefully as a tool to create, connect and liberate.

Learning other languages is an excellent way to broaden our understanding, sensitivity and tolerance for others from different cultures. It provides a window into the thinking and perceptions of other people. It also helps develop "cultural vision" which Bateson (1994) believes is needed to allow us to have a greater and wider vision of the world. She refers to this as "peripheral vision." This is a way of attending to the various experiences and learning of life, even to the rituals and poems stored in our memory. Rather than narrowing our attention by "paying attention," which is frequently the

directive given in the school setting, Bateson would have us open our attention to everything in life. She believes that each thread in the tapestry of our existence needs to be woven together into beautiful patterns within our minds. In this way we can see the many layers of meaning in a word and an experience.

Humans think in metaphors or images (Bateson, 1994). These metaphors in turn direct our thinking and the words we use. The more emotionally charged these images are, the more they will influence and direct the rational mind (Goleman, 1994) and the words we choose to convey these emotions. Negative emotional states often elicit negative thoughts, cynical images and language. The pessimism of our words will in turn generate more negativity and depressed neurochemical responses.

We learn by stories and narratives. Great stories and narratives can support our visions, hopes, expectations and identity (Bateson, 1994; Postman, 1995). Both context and images enhance meaning, learning and physiology. For Postman (1995) these narratives can become the vision or purpose of education. He refers to them as the gods that give direction to schooling and learning. They also have power to heal or destroy, to enslave or free us. Our stories and narratives are created and influenced by experience, language and culture, and they control us unless we realise that we have the ability to create and recreate our own stories and metaphors. Words like magnanimity, nobility, humility, generosity, forgiveness, love and peace have the power to heal and connect rather than divide and destroy.

Gardner (1993) speaks of creating a new metaphor of a learning community. He sees these communities bringing unity and cooperativeness into our lives and helping us develop relationships with others and things. However, most schooling today does not

support this metaphor and has a tendency to disconnect learners from self and community. The scientific model tries to eliminate metaphors and promotes linear thinking. It would have us even remove self from our research and writing.

As Palmer (1998) proposes, our words should open space rather than fill it. Bateson (1994) cautions that we need to choose our metaphors carefully and be responsible for them, remembering that a metaphor can either provide new insight and revelation or confusion and obscurity. Children need to know that they have worth and identity beyond grades and academic honours, that they can make a significant difference in this world and that the metaphors they choose to accept will drastically influence their thinking, learning and lives. As our narratives become more complex and ambiguous, the demand for greater resilience and creativity is required (Bateson, 1994). We need to be emotionally adaptable and flexible in our thinking, while holding on to the good and the memorable in our lives. Good memories provide a sense of continuity amid change and are a stabilizing force allowing us to continue to grow and progress while treading into new territories of thought and learning.

Reframing

Changing our frames of reference may involve changing our metaphors, the words we use and our language structure. As I have worked with individuals suffering from panic disorder and depression, helping them to see challenges as opportunities rather than punishment has provided an avenue for healing. Teaching them to form peaceful images and to reframe relationships and situations has also proven beneficial.

The thoughts we think and the words we use affect us physically, mentally and emotionally. When my patients saw their doctors as healers and the hospital as a safe and caring environment, they healed more quickly. If we see ourselves as victims, our language and metaphors generally support this image. We describe schools as prisons or factories, the earth as polluted or a space ship, and work as drudgery. What if we were to change these images of schools to magnanimous, living, protective communities, of the earth to a living, nurturing life form, and of work to a right and privilege? What influence would this have?

Shifting metaphors and language is powerful medicine. The words we choose to describe others and ourselves will either destroy or edify. Labelling can be cruel and malicious. However, too often we focus on problems and negatives more quickly than the strengths and good in others. Children are grouped, categorised, graded, put into classes and sometimes branded for life by parents, teachers and society. Perhaps it is time that we celebrate the uniqueness, the distinctiveness and individuality of children. It is within the visions of health that we are healed, not through the images of disease.

Resilience can be increased by seeing mistakes differently. Errors and mistakes can be opportunities for learning if they are made honestly and without malicious intent. Schools, however, have a tendency to teach that there is only one right answer. While sometimes there is only one answer, more often there are numerous answers and approaches to a question or problem. Greater emotional and intellectual learning occurs when we are able to approach a problem by trial and error rather than attempting to eliminate or account for all possible variables before we act. Anxiety and worry can undermine the child who believes he has to give a correct answer to every question or be

ridiculed or punished. Supporting personal identity by viewing error as an opportunity to learn may be a means of keeping the delight and excitement in learning. This is accomplished by the metaphors we accept and the words we think and speak.

We need to transform language and transcend images and metaphors that debase and demean. Our words need to be chosen carefully to draw us together and to lift us beyond the mundane and common place. Our language needs to edify and create new worlds of peaceful interactions. Thoughts and ideas can design and fashion better relationships and a more benevolent planet. As we accentuate the good, the beautiful and the noble in learners, learning and technology, institutions will be changed and lives improved. When our effort reflects our ennobled language, magnanimous results will follow. Like the metaphors of the butterfly and the chick, the struggle from the chrysalis and the egg is essential to strengthen us for the challenges and opportunities of life. All the energy and hard work are indispensable when associated with the ensuing dignity and integrity that flow from magnanimous efforts.

CHAPTER IX

A VISION OF EXCELLENCE APPROACHED FROM A SYSTEM OF MAGNANIMITY

Men do not care how nobly they live, but only how long; although it is within the reach of every man to live nobly, but within no man's power to live long.
Seneca (see Dale, 1984, p. 61)

It has been noted that "the late 1990's witnessed a resurgence of scholarly interest in magnanimity, a virtue especially central to energetic, ennobling, efficacious political leadership" (Keys, 2001, p.1). Anciently Aristotle's magnanimous man was the epitome of human excellence. However, he was also devoid of humility and gratitude. He was a high-minded elitist who had greatness of soul, nobility akin to arrogance and considered friendship the ultimate external good. Nevertheless, though magnificent and willing to give for the welfare of the common good, he was still extremely concerned with external honours and could not allow himself to be indebted to anyone. Thomas Aquinas, building upon Aristotle's model and ideas of magnanimity, created an exemplary man who did not hunger for external goods, who was humble, grateful and a perfect example of charity. He was a more congruent, peaceful figure moving towards transcendence (Keys, 2001).

Magnanimity is defined in Webster's Third New International Dictionary (1981) as a loftiness of spirit enabling one to sustain danger and trouble with tranquility, firmness and courage; a loftiness of ambition and outlook; a nobility of feeling that is superior to meanness, pettiness, or jealousy and that disdains revenge or retaliation; a

generosity of mind (p. 1359). Thus, one who is magnanimous is courageous, noble of feeling and generous of mind, incapable of pettiness and or meanness; one who is forgiving. It is this definition of magnanimity that I have used for a vision of excellence in education. It is not an elitist or exclusive vision. Instead, it is a system that is all-encompassing and inclusive, drawing everyone together in a community relationship.

An educational vision of excellence based on magnanimity is a hologram, a beautiful synergistic gestalt. Its end or purpose is an integration of all the facets of learning and intellect in order that the learner may function in society with integrity and congruency of thought, word and action. This system is founded in the rich heritage of past generations and is grounded in the best of current thought and practice. It is a dream for a better tomorrow and a design for achieving that vision. Like a hologram, a vision of excellence approached from a living, vibrant system of magnanimity is manifested in all teaching, in all technology, in all interactions. The words spoken, the metaphors and narratives created, the teaching methods and tools used all support magnanimity.

Mistakes are accepted as a normal part of the learning process, and strengths rather than weaknesses are accentuated. Any weaknesses are compensated for and approached through the learners strong points. No child is negatively labelled or demeaned either in word, in writing or in deed. Evaluations of progress include assessments of physical, kinaesthetic, cognitive, social, emotional and moral development (Goddard, 2002; Kohlberg, 1981; Murray). Progress is determined by comparing a learner's growth and development with his or her own base line established at the beginning of each school year along with his or her abilities and efforts.

Standardised scores serve only as guides to evaluate and design learning goals and methods for individual achievement.

Nobility of character and moral development flow naturally throughout this system without having to be taught directly, although respect and reverence for the wholeness of an individual is emphasised and expected. The end or purpose of education in a magnanimous system focuses on both the worth and development of the individual learner and his relationships within and without the learning community.

Graciousness and generosity encourage uniqueness rather than conformity and standardisation while emphasising respect for and boundaries within communities of learning. It is a vision of excellence and a system of consideration and respect for all humanity. It teaches and develops all facets of the mind and celebrates the distinctiveness of every learner. Magnanimity in its generosity of spirit and respect for the rights and diversity of others seeks to protect and safeguard the learner and the entire community. It is a vision for learning through service and collaboration, as well as personal effort and enterprise.

Boundaries, as well as insightful and timely discipline based on fairness and order, provide security for the learner, understanding that it is always easier to extend parameters as maturity and circumstances merit than to establish them later when none were presented initially. "Without someone who cares, someone to teach and guide and love and discipline" children, how will they learn? "How does a child learn the boundaries without testing the edges and being secured by those who love him and establish restrictions?" (Kapp, 1978, p. 88). If we embrace borderless learning communities and chaos, we invite confusion and disorder. Discipline is a safety net when

it does not enslave or suppress. Fair and just rules and laws protect against greater regulation and laws or calamities that result from anarchy. Magnanimous learning communities provide parameters that keep members safe from harm and protected from bedlam realising that ". . . a place is only safe if it is dependable, if it is secure, if it is steady" (Kapp, 1978, p. 17).

Attributes of a Vision for Excellence Approached from a System of Magnanimity

Worth

All learners have great worth. All peoples of the world have worth. Everyone is valued for his humanity and personhood and not for his marks and achievements. Effort is as important as level of achievement.

Respect

In the ideal magnanimous society, no one is demeaned or belittled by parents, family, friends, peers, teachers, administrators or anyone else. All ways of knowing and beliefs that are beneficial and edifying are acceptable. The opinions of others are listened to and recognized while adhering to rules of conduct that prevent violence to another's identity or beliefs. All within the learning community, including technological devices and systems, support and maintain the dignity of the learner.

Effort

Honest, sustained effort is rewarded as well as results. Learners are never reduced to products and outcomes. People are not distanced and made objects by design, research or in discussion.

Integrity

The honour, name and reputation of all within these learning communities are revered. This attribute goes hand in hand with respect for and worth of the individual. Though some may struggle to meet their full potential despite the noble and generous efforts of others, this is not used as a reason to put down or humiliate another. Reputation is guarded and protected, not violated.

Inquiry

Inquiry is an important part of learning, transformation and transcendence. Some believe we have spent too much time searching for better answers when we should be developing better questions. The more pertinent and resolute our questioning, the more likely we are to find answers. However, this inquiry needs to preserve the integrity of others and ourselves. Appreciative inquiry (Busche, 1995; Busche, 1998; Mann), which focuses on strengths rather than weaknesses or problems, would fit well into this vision. All excellent methods of research, including quantitative and qualitative, would be accepted and encouraged. For the designer "to evaluate formal design education it is necessary to ask some awkward questions. Not only to disturb our unthinking acceptance of social norms, but to bring some very practical matters sharply into focus, and others to

dismiss as marginally relevant" (Potter, 2002, p. 22). Thus, it is with each who inquires to know and to create.

Reflection

We need to "keep our expectations in balance with our effort" (Kapp, 1978, p. 61). Personal reflection and evaluation assist in maintaining a healthy balance. Written and oral reflections are encouraged.

Language and Words

As discussed earlier words, language and metaphors are powerful transforming influences. Understanding how and why we form the images and metaphors that we use is an essential component of magnanimous learning and living. In a magnanimous system learners would be taught how to evaluate and reflect upon the ways their words and language influence personal narratives and stories and how to direct their thoughts in order to create more edifying and productive images when necessary. New metaphors would be explored to achieve greater understanding and unity within these communities of learning and self. Creative writing and the reading of classical literature would assist with this development.

Service and Community

Connection with one another and nature would be emphasised, explained and demonstrated. Service for the community along with collaborative projects would focus learners outside themselves and would help them develop greater empathy and

consideration for others. Learning to work together for the good of others would be a central element in all magnanimous learning and learning systems.

Safety and Trust

One of the basic needs of individuals is to feel safe without enslavement. Boundaries and respect for self and others help to increase the likelihood of a secure environment for learning. Consistency and congruency of goals and vision relating to magnanimity further strengthen feelings of protection and trust. As safety and trust are such fundamental concepts, constant attention would need to be given to their existence and preservation within the learning community.

Physical Needs

Most children who come to school hungry and physically needy must be fed and cared for before significant learning can occur. Generous concern and assistance would be given to those in need while helping them to a state of independence and dignity. Physical abuse or abuses of any kind would not be tolerated. If any abuses occurred, they would be dealt with in a fair but direct and immediate manner. Physical activities to teach coordination and to train the body would be an important part of the curriculum. A healthy balance of cognitive and physical exertion through games, outdoor activities, work, athletics and the arts would be key components toward integration and congruency.

Goals of Magnanimous Learning

Integration

Drawing together all of the attributes mentioned previously and striving for harmony of purpose within the classroom and community would be an important pervasive goal. All aspects of the intelligence would be considered and dealt with through the curriculum and modelled by the behaviour of parents, teachers and administrators. An important player in this integration process would be technology. Systems and devices that expand and refine volition and teach the power of knowledge when well applied systematically would provide avenues for accessing truth and discovering laws and pure knowledge.

Knowledge and Truth

In a vision of excellence, it would be accepted that man does not know everything and that as humans with limited resources and insights into the potential of humanity, we need to remain open to all possibilities. A wise balance and mix of objective and subjective observation and research would be used to search for and to investigate truth and pure knowledge. The best thinking and ideas from all disciplines would assist in discovery and further investigation of laws, truth and pure knowledge. Learners would be free to reflect on and explore new ideas and ways of knowing.

Unity

Unity with society and self as well as the universe would be the focus of this goal while celebrating individuality and uniqueness. Realising a high degree of unity would involve both transformational and transcendent experiences that would lead to greater integration and eventually to complete congruency and excellence.

Peace

As one increased in understanding and unity, a greater sense of peace and purpose results. Peace is a way of accessing truths. Acceptance of the dichotomies and paradoxes of life becomes easier in an environment of respect. Some of the peace in a magnanimous system would be the consequence of more serene images and metaphors. Peace would be the natural result of integrity and congruency rather the effect of altered states. Decreasing violence through integrity would provide greater security, trust and generosity. Although opposition and disagreement would continue to exist, resolution of conflict would be sought for first in kind, peaceful ways. Magnanimity would not exclude the need to fight for one's rights when absolutely necessary for the protection of the family and society from destructive and subversive forces.

Congruency

Congruency of thought, word and action would be achieved through the integration of purpose and intelligence within one's own uniqueness. It would result from being totally aligned with the attributes of excellence and the characteristics and

attributes of a magnanimous person. Congruency is associated with courage and integrity.

Love

"To work well is to work with love" (Potter, 2002, p. 30). Pure love of work, self and others and the progression and well-being of all humanity would be the ultimate quest for the magnanimous person. Through service, humility and genuine concern for the welfare of the community, this would be achieved. All other goals and attributes would flow from pure love and from its realisation. This goal would be sustained by the absence of meanness and retaliation along with a continuous application of forgiveness.

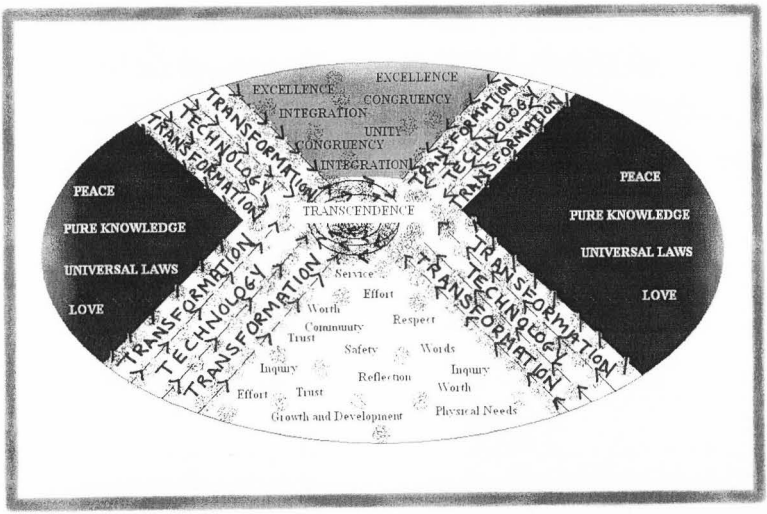
A System of Magnanimity

The foundational attribute, goal and power of this vision of excellence is magnanimity. An understanding and practicing of the qualities of a magnanimous person would allow the current educational system to be transcended, not just transformed from present conditions. The greatest shift would be an attitudinal one.

The overall purpose of this vision of excellence is to attain to an approach in education, technology and community that is immersed in the attributes and ideals of magnanimity. It would be a pervasive image taught in the home, in schools, in business and throughout all aspects of society. Transformation, or change and development and transcendence, as a connecting with pure knowledge and truth, would transpire in an atmosphere of peace and pure love where respect and generosity abounded.

Transformation would be assisted by technology and would be on going throughout a lifetime of learning, experiencing and developing. Transcendence would be a spiralling process that would in due time draw one into a perfect magnanimous setting once integration and congruency were fully attained (see Figure 2).

Figure 2: A vision of excellence approached from a system of magnanimity



Instructional Technology in Magnanimous Learning Communities

Excellence in educational and technological design would be the vehicles for magnanimous learning. Green's (1999) five consciences (conscience of craft, membership, sacrifice, memory and imagination) would be prevalent in this vision, as would the common factors (learner factors, relationship and community factors, hope and expectancy, and model or technique) of transformation and learning success (Hubble, 1999). As Potter (2002) observed,

> the intelligent way to meet any promise of new life must be with gratitude untinged by cynicism . . .education must lose much of its formality in pursuit of a warmth and flexibility of outlook. This does not imply abandoning standards of intellectual discourse or of real attainment in any field (p. 29).

Nor does it mean schools becoming clinical or therapeutic settings. This is not a feel good approach to learning. It is, however, a new point of view and attitude toward the purposes of education, design and the way we educate. Nevertheless, more quantitative and qualitative research will help determine the efficacy of this vision of excellence and the impact of communities of magnanimity on the transformation and transcendence of a global society.

CHAPTER X

CONCLUSION

A shared vision is not an idea. . . It is, rather, a force in people's hearts, a force of impressive power. It may be inspired by an idea, but once it goes further – if it is compelling enough to acquire support of more than one person – then it is no longer an abstraction. It is palpable. People begin to see it as if it exists. Few, if any, forces in human affairs are as powerful as shared vision.
Senge (1990, p. 206)

When I was a student nurse, I was invited to a one-day medical conference in Toronto. To my surprise, I was the only student in a room filled with hundreds of hospital administrators and professionals from various medical fields. A distinguished panel of experts spent the morning sharing their perspectives on the drug problems in the late 1960's and early 1970's and how more programmes and institutions were needed to meet the growing concern. As I listened to the comments and arguments, I felt too much time and effort were being spent on fixing rather than preventing. Before being dismissed for lunch the doctor in charge of the conference said that when we returned, a microphone would be set up in the middle of the room for members of the audience to share their opinions on what had been said.

Being young, inexperienced and quite intimidated by the whole setting, I determined quickly that I would not have anything to share. When we returned from lunch, many of the hospital administrators stood to voice their concerns and opinions. Most of what was said reflected the pessimism of the panel and focussed on constructing more halfway houses and creating more programmes to deal with addiction. The more I

listened, the more I felt my restlessness increase. Before I knew what I was doing, I was half way to the microphone. It was then that I started to think, "What am I going to say to these highly educated people? How can anything I have to say make a difference? What am I doing?"

By this time I was standing in front of the microphone, and the silence in the room was deafening. The first comment out of my mouth was, "I think the direction of this conference is very negative and focussed on fixing a problem rather than looking at why we have the problem in the first place." No one on the panel said a word, and I wanted the floor to open up and swallow me. Instead, I proceeded to give some ideas about how society, families and individuals could be taught, supported and strengthened in order to prevent drug use and abuse. Finally, one of the panel members asked how I proposed to bring those entrenched in the drug culture into such a vision. Inside I was thinking, "Why did you ever get up in the first place! These are educated people, with years of experience and education, and you are nothing but a student nurse."

I promptly replaced my demeaning self-talk with courage and replied that "If we emphasised the strengths within the family and the individuals and centred our efforts on prevention, then even those deeply rooted in the drug culture would some day be drawn into a more healing, caring way of life. Again, there was a deafening silence. I decided to return to my seat before I was asked any more questions that I felt incapable of answering. As I made my way through the room to my table, a hand reached out to me, and I heard, "Thank you dear for sharing those thoughts. Someone needed to say it." Then one of the panel members indicated that my ideas were worth considering. The whole mood of the conference changed. One person after another came to the

microphone to contribute more ideas regarding how resources and expertise could be used to prevent addiction and deal with the escalating drug use.

I learned many lessons from that experience, and my life was transformed by this event. I realised the power of one voice. Though naïve and nervous I provided a new frame of reference that many were waiting to embrace. This was a transcendent incident in my life as well. It did not bring much peace to me initially. Nevertheless, it did create a fresh dynamic community within that conference that turned the course of the discussion from a pathological, problem saturated perspective to a vision of hope and possibility. All this was accomplished by an image founded in a belief that the power for change comes from a positive vantage point, by words that supported this image, a lot of courage and a microphone.

A vision of excellence for Instructional Technology is also an image of possibility, merit and virtue. It is an image immersed in a system of hope and expectancy, of high ideals and mutual respect. When we abandon our military-like camps of knowing and join as peaceful and benevolent communities of learning, bringing with us all of our differences and commonalities, then our shared visions will open the doors to discovery and truth. I believe it is in these communities of magnanimity that the answers to my opening inquiries can be found in their entirety.

I have cared for children who been given all of the physical necessities of life but have failed to thrive because of a lack of love. I have seen a starving child divide a sandwich with his brothers and sisters before taking a mouthful for himself. I have seen the healing effects of classical conditioning and cognitive reframing. I know the influence that the arts have on people. I have seen the power of words to transform

thinking and have experienced the realities of transcendent "knowing." Life and learning are far from linear or hierarchical. Great things still need to be discovered and revealed.

Murphy (Hubble, Duncan & Miller, 1999) shares a story about a man who is searching for something under a street light. Another man walking down the street notices his friend looking for something and goes over to help him. His friend explains that he has lost his keys. The two men search for a long while. Then the friend stops and asks specifically where the keys were lost. The answer is, "Over there in the field across the street." "Then why are we looking here?" His friend promptly replies that the light is much better under the street lamp than across the street in the field. Murphy then explains that the keys of change have traditionally been searched for on the familiar roads of "deficiencies and weaknesses." However research . . . "suggests that solutions are more plentiful on the less familiar road of strengths and resources" (Hubble, Duncan & Miller, 1999, p. 380). Even Hans Selye (1974), who is considered the father of stress research, after years of exploring "the laws of Nature," concluded that altruism is the definitive purpose of life. He writes that "there will always be leaders and followers, but the leaders are worth keeping only as long as they can serve the followers by acquiring their love, respect, and gratitude" (p. 143).

Dreams are realised through a wholeheartedness to take the best from the present and to not only transform but to transcend it. Thus, as my journey through Instructional Technology comes to a close and preparation for another begins, in my mind I hear the words of a popular song. Perhaps it could be the theme song for a magnanimous community of learners . . .

"Don't lose your way with each passing day.
You've come so far, don't throw it away.
Live believing dreams are for weaving,
Wonders are waiting to start.
Live your story . . .
Hold to the truth in your heart.
Souls in the wind must learn how to bend,
Seek out a star hold on to the end . . .
If we hold on together,
I know our dreams will never die . . ."
(Horner & Jennings, 1988).

Recommendations

I believe that as Instructional Technologists and educators whatever and whenever we design and teach, we must make every effort to:

1. Increase connection with one another and self through integrity as well as by considerate, selfless behaviour;
2. Increase our humanity by not objectifying people or their efforts as products or outcomes;
3. Bring greater healing and wholeness to individuals by nurturing hope and expectancy within them;
4. Address and teach all aspects of an individual's being and uniqueness;
5. Encourage respect, fairness and understanding through collaborative efforts, nurturing narratives and shared visions;

6. Emphasise shared values and metaphors while celebrating individuality;
7. Seek to bring greater peace and love to humanity by magnanimous means;
8. Promote generosity, kindness, thoughtfulness and benevolence in the home, school, community and a global society;
9. Teach the importance of forgiveness and compassion toward others and self;
10. Assist in the process of transformation and transcendent learning by focussing on individual strengths and abilities;
11. Integrate truths from all disciplines to achieve magnanimous ends; and
12. Seek excellence in communication, craft, service and relationships through magnanimity.

These recommendations are not in any sequential or hierarchal order. Nor do I believe that this list is complete. However, I do think that the litmus test for any learning programme or technology is found on the path of magnanimity leading toward a vision of excellence. The direction we are heading on this path is the key to success and meaningfulness. If we continue, however, to promote ineffective narratives and frivolous ends, the journey may provide great diversion and lucrative returns, yet I doubt we will be a people sufficiently educated to face the challenges that currently beset us and to transcend them in emotionally literate and intellectually mature ways.

I recommend a system of magnanimity as a means to a greater and more connected end for all humanity. This vision of excellence requires a shift in attitude rather than method, unless the method is in conflict with a magnanimous approach. It recognises and respects all ways of thinking, customs, beliefs, while showing courtesy, and generosity to others. I believe we are each capable of influencing and recreating this

world. My hope is that we will take time to reflect and inquire about the value of a magnanimous reality, then put forth the effort to test and study its validity for a more benevolent global existence.

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