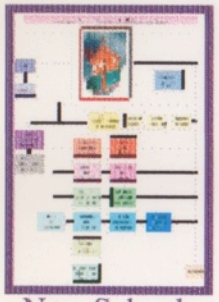
We Live in an Interactive Universe!

CLARE'S MASTER'S PROJECT:

New Schools for a New Millennium:
Transforming Public Schools into Holistic Educational Centers



New Schools

a Vision

We Live in an Interactive Universe!

New Schools for a New Millennium

Facilitators

Teachers

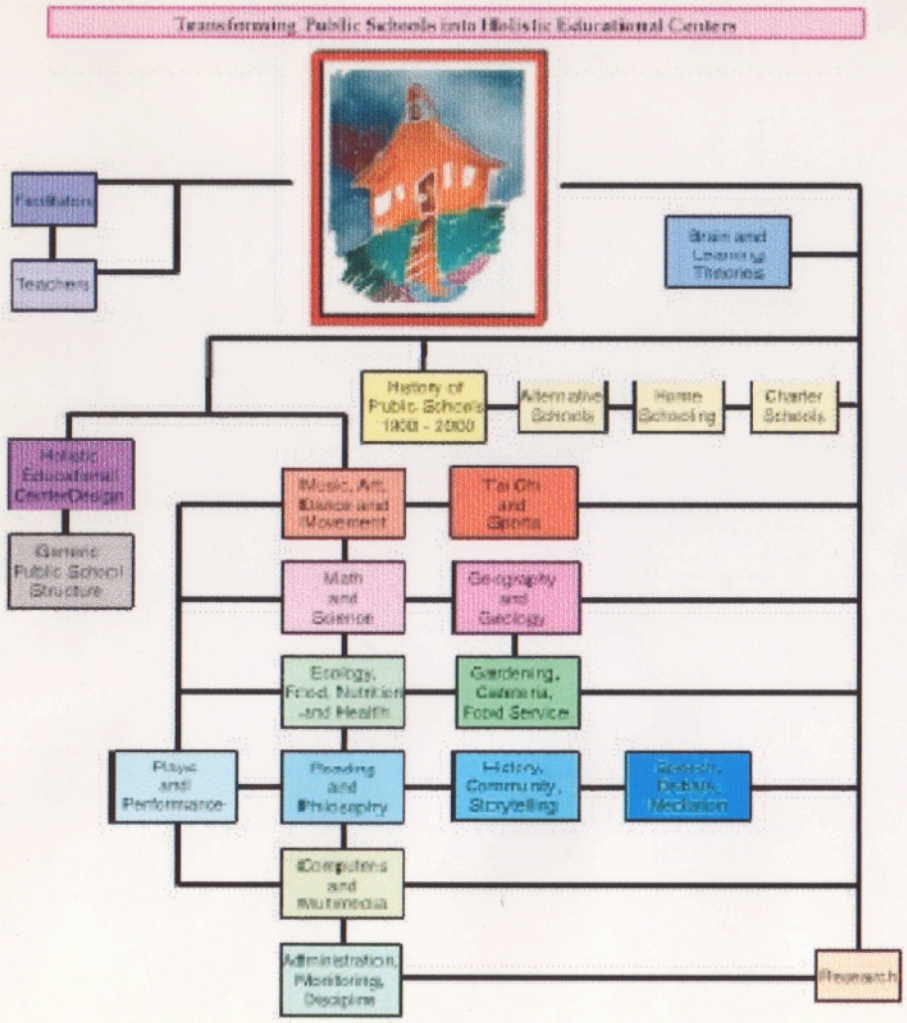
Holistic Educational Center Design

Generic Public School Structure

Music, Art, Dance and Movement

Math and Science

Ecology,



Clicking on the various areas will offer glimpses of different ways of viewing education

Brain and Learning Theories

History of Public Schools 1900 - 2000

Alternative Schools

Home Schooling

Charter Schools

Tai Chi and Sports

Geography and Geology

Gardening,

Food, Nutrition and Health

and a much needed transformation of public schools.

This area is in process.

Cafeteria Food Service

Research

Plays and Performance

Reading and Philosophy

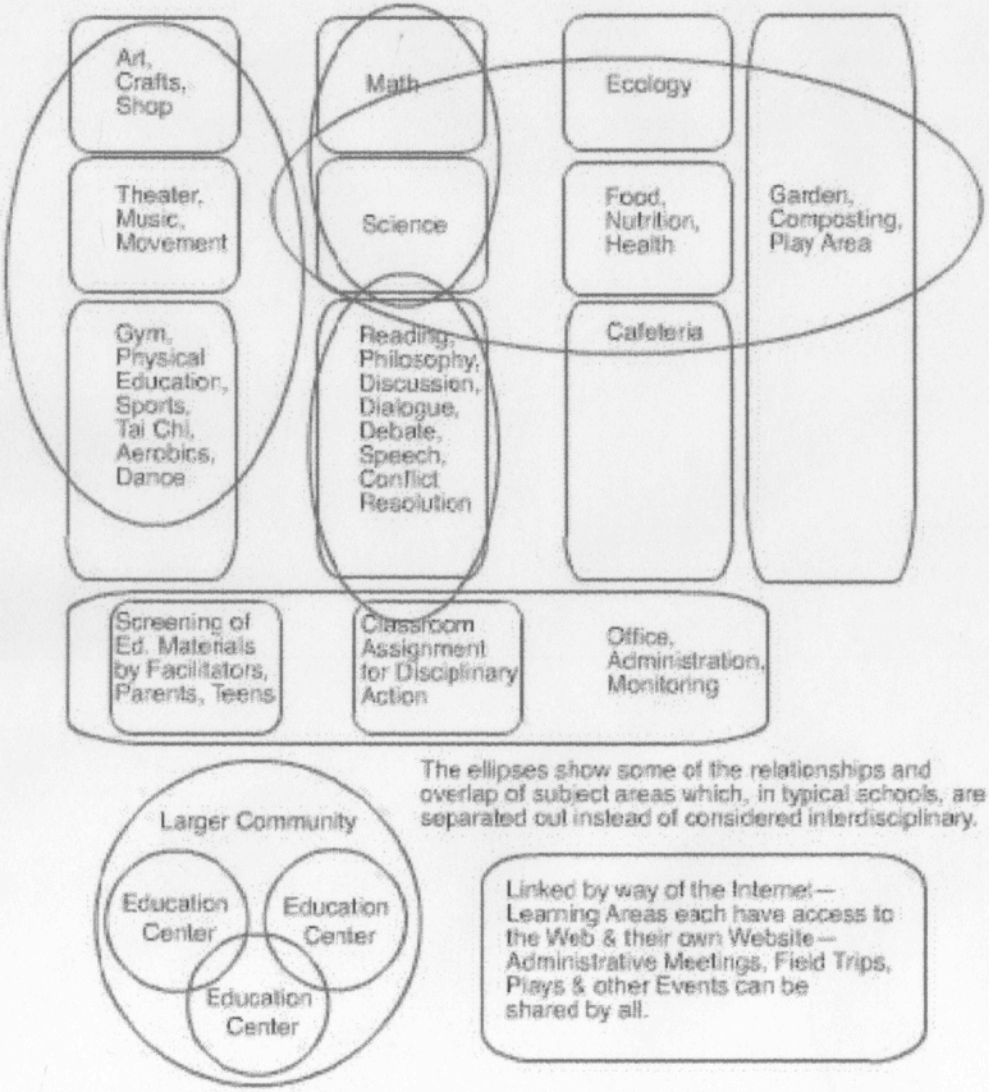
History, Community, Storytelling

Computers and Multimedia

Administration, Monitoring, Discipline

Speech, Debate, Mediation

The Physical and Interdisciplinary Design of an Educational Center



The above image is meant to offer the viewer a sense of possibility—instead of 3rd grade classrooms, etc., the rooms are learning areas for various age groups to share.

Instead of the image of a teacher as one who feeds children full of information to spew back at them—new schools would have facilitators, who know that learning happens from inside out. Facilitators and children would dialogue about the thoughts that come up in relationship to what they are learning. Questioning would always be encouraged. The children would begin to understand how they each learn in their own unique ways. Moments of silence would come naturally to a child who begins to watch his or her thoughts. Social activities amongst the children would take on a different quality, for diversity and conflict would be understood more deeply. The ability to relate well to others and to concepts would be enhanced by an environment of curiosity, questioning, examining, and exploring without the judgement that exists now, and without the grading and testing systems which so inhibit intellectual, psychological and emotional growth, not to mention spiritual.

It would be a lot more satisfying for a biology focused person to be the facilitator in a room full of biology and related information than for the expectations of today's teachers—to know something about too many things without ever being able to quite keep up with the most recent developments in all those areas, let alone maintain order in a classroom where children are forced to conform to generally accepted learning styles, etc. The rooms—areas of focused learning—could be carpeted and have cushions and couches. Spaces would be set up with a video and headsets in one section, with maybe a few computers not far away, tables for drawing and writing and for individual projects as well as co-operative projects—children listening, sitting, standing, drawing, watching, conversing quietly—all different ways of exploring the focus of the area within which they may remain for a couple of hours.

In the room is a facilitator—a teacher whose focus is biology, for example, and who also has an assistant—to offer more information, guidance and to demonstrate the resources available.This is not a far-fetched idea in that new standards in education are pushing to require teachers to have a Master's Degree. In my vision, I offer a description of classrooms based on areas of learning—as in a biology room, a reading room and so on—with a Master degreed person as the facilitator along with an assistant. The facilitator is monitoring everyone—aware of where the students spend their time, assisting when necessary and initiating an activity when called for.

Jobs could be provided for teens in the 15 - 18 year old group at the center, working in the office, reviewing or screening new learning materials, working in the garden and cafeteria and facilitating after hours. The issue of teens wanting, and often needing a job, can be solved by having them be of service at the center where their sense of community will be expanded, and where they'll develop experience in relationship skills, teaching skills, etc., to carry over into their life after their last year at the center.

"Currently, the students I encounter seem far more uncertain about the project of self-actualization than my peers and I were twenty years ago. They feel that there are no clear ethical guidelines shaping actions. Yet, while they despair, they are also adamant that education should be liberatory. They want and demand more from professors than my generation did. There are times when I walk into the classrooms overflowing with students who feel terribly wounded in their psyches (many of them see therapists), yet I do not think that they want therapy from me. They do want an education that is healing to the uninformed, unknowing spirit. They do want knowledge that is meaningful. They rightfully expect that my colleagues and I will not offer them information without addressing the connection between what they are learning and their overall life experiences" (hooks, 1994, p.19).

"Accepting the teaching profession as my destiny, I was tormented by the classroom reality I had known both as an undergraduate and a graduate student. The vast majority of professors lacked basic communication skills, they were not self-actualized, and they often used the classroom to enact rituals of control that were about domination and the unjust exercise of power. In these settings I learned a lot about the kind of teacher I did not want to become" (hooks, 1994, p.5).

The following picture is based on today's statistical information directed at new teachers: "As you survey your sixth-grade students, you see that 15 boys and 14 girls are present; 7 of your students are Latino, 6 are African America, 4 are Vietnamese, and 12 are white. You know from reading background records that six are learning disabled, and muscular dystrophy has confined another to a wheelchair. One of the children has been identified as exceptionally gifted. About half of your students are from single-parent homes. A third of the children come from middle-class backgrounds, and the remaining two-thirds are from working-class or poor families. You know from your training, reading, and experience that each of these 29 individuals will have been shaped, in part, by conditions of race, ethnicity, exceptionality, social class, and gender. You understand that these characteristics will influence how these children perceive the world—and how the world views them. You also know that each one is likely to have a learning style as unique as his or her handwriting" (Sadker and Sadker, 1997, p.122).

" It is difficult for many educators in the United States to conceptualize how the classroom will look when they are confronted with the demographics which indicate that 'whiteness' may cease to be the norm ethnicity in classroom settings on all levels. Hence, educators are poorly prepared when we actually confront diversity. This is why so many of us stubbornly cling to old patterns. As I worked to create teaching strategies that would make a space for multicultural learning, I found it necessary to recognize what I have called in other writing on pedagogy different 'cultural codes.' To teach effectively a diverse student body, I have to learn these codes. And so do students. This act alone transforms the classroom. The sharing of ideas and information does not always progress as quickly as it may in more homogeneous settings. Often, professors and students have to learn to accept different ways of knowing, new epistemologies, in the multicultural setting" (hooks, 1994, p.41).

Educational centers—new public schools—could exist for all children and anyone who wants to learn. It's already in practice that some inner city schools remain open from 7am until 7pm to feed children and offer child care. Why shouldn't an educational center be open 6 days a week? We don't need new buildings—it's about conversion.

We convert the classrooms that exist today into a geography room and a math room and a theater room, music room, dance room, a health room, reading room, and of course, there would be a garden, and a cooking class in the cafeteria kitchen. How about a playground that is not completely covered over by concrete? Groups of children could go out regularly on field trips, for if you are studying geology you should see some rocks, and if you are studying biology you should know about where those life forms are and with whom they live and how.

A school existing right now with 12 or so classrooms, could designate those classrooms as the reading room, writing skills room, science room, etc., according to space, number of children and local community priorities. The computers—not just any computers and not just any software—are a part of the whole.

The rooms allow children to explore every possible aspect of whatever is the focus, limited only by the amount of material it can contain, and of course, with computers, information is extensive. Explorations involve reading and writing about the subject, drawing pictures and discussing, creating projects, even making little books printed out on the computer. Typically, the environment would have work tables, couches, cushions, a few computers, a television with videos and headset, and books and games related to the subject of focus. "Specialization within a complex system allows greater growth—hence dedicated rooms," Dr. Barry Martin, instructor, Living Systems, at John F. Kennedy University.

Instead of grades, age groups of 6 - 10 year olds, 11 - 14 year olds, and 15 - 18 year olds, would move through the day in particular areas at specified times. For example, during the mornings, from 8 to 10 am, only the 15 - 18 year olds would be in the ecology room. Then from 10 am until noon, the 11 - 14 year olds would have their turn there, and from 1 until 3, the 6 - 10 year olds. The students would spend one or two hours in the room. There would be an hour for lunch with some overlapping, perhaps beginning at 11 am and lasting until 1pm. Those students in nutrition and gardening, during particular days and times, could have a part in the food preparation.

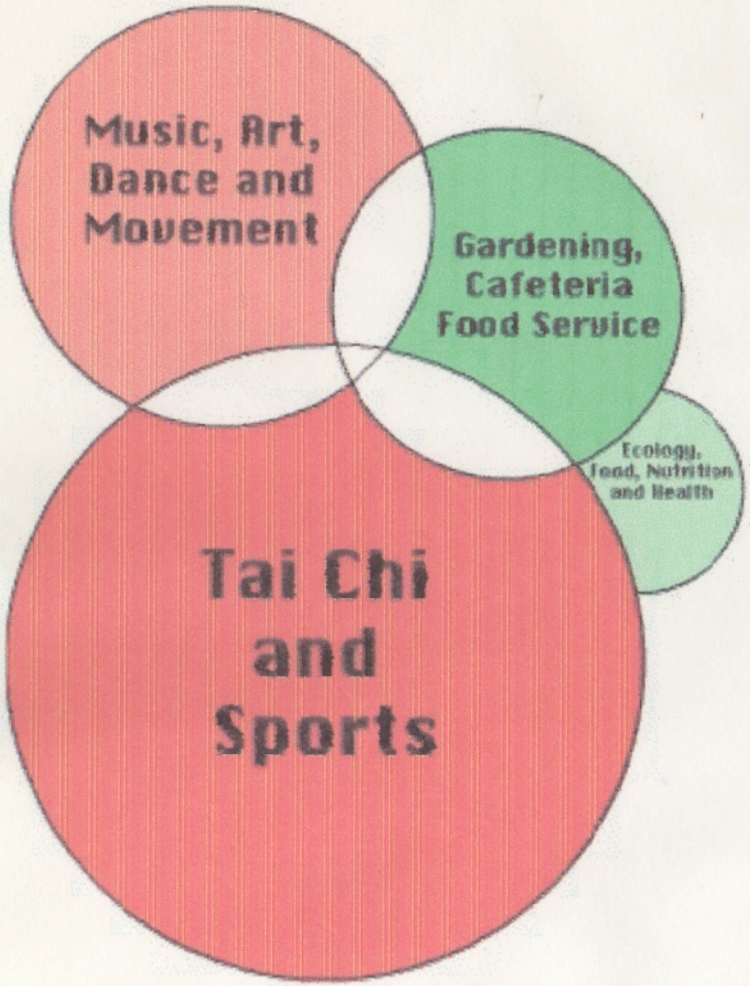
Diversity in age would be yet another addition to stimulating the learning environment. The scaffolding that helps children in their developmental stages would be naturally in place, for they would observe and work with those who are learning what they too are about to learn. This would reinforce the new learning as it is being shared and a sense of confidence would be enhanced as well, which means curiosity will be expanded, motivation to learn will be stimulated, etc.

"Holistic educators recognize that all aspects of human life are fundamentally interconnected. They contend that education must be concerned with the physical, emotional, social, esthetic/creative, and spiritual qualities of every person, as well as traditionally emphasized intellectual and vocational skills. They argue that our present culture's emphasis on rational intellect, economic achievement, competition, and the uncomplaining performance of social roles is lopsided. To be 'well-educated' in the modern industrial world means to be well disciplined; it is to be alienated from one's own spontaneous, creative, self-actualizing impulses. Holistic education calls for a new recognition of the organic, subconscious, subjective, intuitive, artistic, mythological, and spiritual dimensions of our lives" Miller. R. (1992) p.153.

As children have come to feel more and more that schools are like prisons, schools have begun to physically resemble prisons. This is no accident.

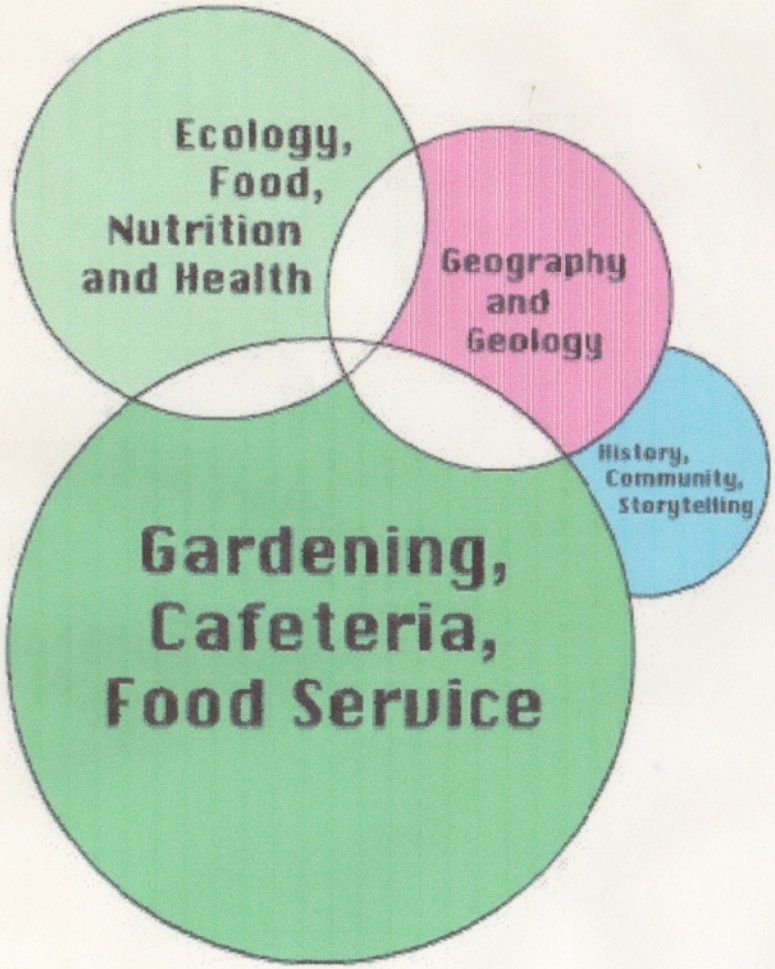
There's nothing more wonderful then loving what you are learning and that is an uncommon event in schools and that loss carries over into career choices, etc. Teenagers are showing us in every way possible, how unhappy and unsatisfied they are with schools as they exist today.

The following approach would be helpful indeed: "Our intention is to help make visible a strategy of inquiry. What this means in the context of the new education is this: in the world in which we live, there are fewer and fewer closed systems that have any relevance either to knowledge or to life. Our students will need the most frequent opportunities to think about problems in an open way; that is, to make choices and to find solutions" (Postman & Weingartner, 1969, p. 119).


Music, Art, Dance and Movement
Gardening, Cafeteria Food Service
Ecology, Food, Nutrition and Health
Tai Chi and Sports

Dance!

Educator Elaine de Beauport, author of The Three Faces of Mind, has developed a model of the brain's three major areas and ten intelligences. She says, in an article in Intuition Magazine, "Children who are flunking math were helped to visualize equations. After taking art courses, they could access numbers through images" (p. 26).



In my research, I came across a school with a holistic perspective that teaches ecoliteracy, although that term is not used. It is the Environmental Middle School in Portland, Oregon. "At EMS, once a month, each class takes turns preparing a meal for the entire EMS community. We delight in memories of smells of a variety of foods, watching students, teachers, and parents plan their special meals and hustle with shopping at a nearby store that sells organic foods. The very act of cooking can bring people closer: we have seen a

sense of efficacy in children's faces when the class in charge of serving the meal plans, cooks, sets up the classroom to serve, and welcomes people, providing ample opportunities for carrying on good conversations while eating together ... We have also begun a 'Salad Days Project' at a nearby farm to teach students ecologically sound and sustainable agricultural practices. Students have already planted salad starts in their classrooms using growlabs. Soon they will be utilizing these starts to plant in vegetable beds that they will have created and cared for at the farm and also in the gardens we built at the school site" (Williams, Taylor and Richter, pp. 21, 22).


Reading
and
Philosophy
Tai Chi
and
Sports
Music,
Art,
Dance and
Movement
History,
Community,
Storytelling
Plays
and
Performance

Play!

When it first occurred to me that computers could be used as enjoyable, educational tools, video games were new, but I saw immediately the destructive potential of these games. Television was becoming more and more violent (movies already were), and the research was clear enough that violent television could instill a kind of desensitization to violence, as well as a model for violent behavior, which would ultimately create more of the same. But video games went beyond TV in that the children and young people are no longer just watching the violence—the violence is acted out by the young person, with body systems responding as if violence is actually happening.

Too many computer games are full of military mentality. It is partially because of this that there needs to be monitoring of the kinds of software that get into the schools, just as textbooks are not written by just anyone. It is possible that what is presently happening with computers in the classrooms may not be in the children's best interest. Those computer companies who are pushing computers into the classroom probably don't have a holistic perspective concerning education—neither do the politicians, school administrators and many of the teachers and parents. Switching money from certain essential and particularly creative classes to money for purchasing computers is not the best of possible choices. Simply having computers in schools is not the point—how they are being used to enhance a child's educational experience is.

"We can and have overestimated the impact of technology. Or have we underestimated the inertia and stability of schools? Either way, foreseeing the impact of the latest technology—computers and the Internet—is a forecasting task that is fraught with danger. In fact, the first decade of computers in education has brought far fewer changes than originally predicted. Yet the feeling persists that, at some point, technology will revolutionize schools" (Sadker & Sadker, p. 533).

Computers could be used for self-testing and for keeping track of the area of the educational center within which each student is at any given time. There are still pros and cons concerning the use of computers in classrooms.

In an article by Todd Oppenheimer, The Computer Delusion, he notes that when Apple Computer's Classrooms of Tomorrow "dumped" their computers into classrooms, "Apple quickly learned that teachers needed to change their classroom approach to what is commonly called 'project-oriented learning.' This is an increasingly popular teaching method, in which students learn through doing and teachers act as facilitators or partners rather than as didacts" (p.48).

"By using computers with access to the Internet, students could surmount the national barriers that inhibit schools from focusing on global problems" (Sadker & Sadker, p.540).

The reading room would have students reading to themselves, listening to a book on tape while following the text of that book, or at a computer using interactive software to enhance their reading skills. At certain times of the day there would be reading aloud activities, debate, and speech that would spontaneously evolve out of shared interests, etc., happening in that same room.

"Language is a shaping force in our reality, even as our reality shapes our language. We are constantly creating language by our spontaneous adaptations of it to new situations, many of which arise from our creative use of language. Through naming the things and events of our experience, we help to create them" (Pearce, p.130).

"I have no doubt that behind every crime a personal tragedy lies hidden. If we were to investigate such events and their backgrounds more closely, we might be able to do more to prevent crimes than we do now with our indignation and moralizing. Perhaps someone will say: But not everyone who was a battered child becomes a murderer; otherwise more people would be murderers. That is true. However, humankind is in dire enough straits these days that this should not remain an academic question. Moreover, we never know how a child will and must react to the injustice he or she has suffered—there are innumerable 'techniques' for dealing with it. We don't yet know, above all, what the world might be like if children were to grow up without being subjected to humiliation, if parents would respect them and take them seriously as persons. In any case, I don't know of a single person who enjoyed this respect * as a child and then as an adult had the need to put other human beings to death. We are still barely conscious of how harmful it is to treat children in a degrading manner. Treating them with respect and recognizing the consequences of their being humiliated are by no means intellectual matters: otherwise, their importance would long since have been generally recognized. To empathize with what a child is feeling when he or she is defenseless, hurt, or humiliated is like suddenly seeing in a mirror the suffereing of one's own childhood, something many people ward off out of fear while others can accept it with mourning. People who have mourned in this way understand more about the dynamics of the psyche than they could ever have learned from books. * By respect for a child, I don't mean a 'permissive' upbringing, which is often a form of indoctrination itself and thus shows a disregard for the child's own world" (Miller, A., 1984, p.177).

In describing the preconquest consciousness of Neolithic hunter-gatherer-gardeners in the Central Range of New Guinea, E. Richard Sorenson writes, "Infants were quick to notice that the happiness of others made their own lives happier and richer, so they responded accordingly. Soon they realized that the more accurately and fully they conveyed their inner needs and interests, the more quickly rewarding responses were forthcoming. So they displayed true feelings without artiface, as openly and clearly as their tiny frames permitted. The more skilled they were, the happier they were; indeed, the happier were all. Therefore 'tactile-talk' was 'affect-talk', and 'affect-talk' was 'truth-talk'. The messages were more emotionally rewarding. They moved more quickly and more accurately and were usually more deeply evocative. Spoken words did not have the same instant sensuality and were thus more remote from lives sentiently focused. Affect-talk was truth-talk because it only worked when personal feelings were above board and accurately expressed, which required transparancy in aspirations, interests, and desires. With body language based on full-time accurate truth, infants became candid and open, and remained so as they grew. When I first went into their hamlets I was astonished to see the words of tiny children accepted at face value - and so acted on. For months I tried to find at least one case where a child's words were considered immature and therefore disregarded. No luck. I tried to explain the idea of lying and inexperience. They didn't get my point. They didn't expect prevarication, deception, grandstanding, or evasion. And I could find no cases where they understood these concepts. Even teenagers remained transparantly forthright, their hearts opened wide for all to gaze inside" (Sorenson in Tribal Epistemologies, 1998, p.97)

"To be behaviorally intelligent, we need to be willing to observe our interactions from the point of view of an observer and not from the point of view of an owner of that behavior. We need to be a fair witness to this interesting combination of complex interactions that has gone on all our life and that is influencing our behavior today. With such neutrality we will then be able and want to study our childhood experiences with the same curiosity and acceptance that we might use to study any history, whether it be of a family or of a nation. Ask yourself what occurred in the past that influenced your development and is affecting you today. Rather than focusing on your mother and father and what they did or did not do in your childhood, focus on what you probably concluded under those conditions. Do the same with early imprints from your culture, your religion, and your education. What did this organism probably decide? You need to take into account the stimuli and your responses, as well as the conclusions-reaction-decisions of your basic brain, if you want to change your behavior. If not, your heritage serves as a network of resistance against any new desire from your limbic brain or any new decision by your neocortex. This network of resistance is why willpower alone, however strong or well intentioned, does not do much to change behavior. Pattern intelligence was conceived as a way to discover the early links made as a result of the continuous exposure and interaction of this deepest brain with its context. ...we learned to walk as a child in interaction with our environment and by means of responses to stimuli. We stored the pattern of how to walk, and now we walk without thinking about how to do it. In the same way, we were impacted by various kinds of behavior, rather than just motor behavior, from people in our environment, and we learned to act in response to what was happening. Our reaction to the stimuli could have been either imitation or a contrary reaction. All we know is that we were exposed and that our basic brain registered our reaction. Therefore, the censorial memory, message, or pattern, whatever we wish to call it, is registered in our basic brain" (De Beauport in Three

Faces of Mind).

Students would be required to spend from 8 am until 3 pm, 5 days a week at school, much like it is now, but after 3 until 7 pm, the center could be open for the students to remain studying and learning. After 3 pm, age groups could overlap—parents and grandparents would be able to visit and explore and learn with their children and grandchildren. This could be true all day on Saturdays, as well. In this way, the center would be an all-inclusive, educational center where older family members would be able to learn enough so as not to feel intimidated by what their children are learning, and also, would enjoy the self-esteem that comes with personal growth. This would be especially important in areas of poverty with under-educated parents.

Of great importance is the educational center's relationship with the community. If the cafeteria is open for students, why not parents and other family members—healthy meals for a small price instead of say, MacDonald's? It would be important that community businesses and agencies assist in helping the center obtain supplies. By being able to be present at times at the center to observe, as well as participate, members of the community would almost naturally want to assist in the care of this environment that resembles a library and an "exploratorium" and is clearly a good place for the children and therefore, for the community.

"Within Black groups, social interaction styles have been observed to be predominantly 'humanistic' (Smith, 1981), with a focus on informality, expressiveness, and a strong emphasis on the sense of peoplehood that has resulted from a common history of social oppression and ostracism. This sense of peoplehood provides a protective boundary for African American identity, within which members of this minority group, perhaps like others, maintain an intimate bond. There is a common knowingness among Blacks that tends to exclude all but the most trusted of their White compatriots. This point has been neatly illustrated by the writer Alice Walker:

> During childhood I wasn't aware that there was segregation or that it was designed to make me feel bad. White people just seemed very alien and strange to me. I knew that when they appeared everybody sort of stopped having fun, and waited until they left to become alive again. I think as a child you tend to notice the deadening effect on life, more than you would their color (quoted in Lanker, 1989, p.24)." (Harry, 1992, p.52).

Schools might be open from 7 am to 7 pm to provide care for the children of working parents. Dividing the center's 12 hour day into sections could look like this: 7:00 am is breakfast—a healthy meal without much in the way of animal products, pesticides, etc., especially since the children and young people will be learning about these things in ecology, nutrition, health and physical education. The cafeteria would reflect the meaning learned in other parts of the whole.

There would be an hour for lunch with some overlapping, perhaps beginning at 11 am and lasting until 1pm. Those students in nutrition and gardening during particular days and times, could have a part in the food preparation.

Dinner could be available in the cafeteria at 5 pm or so, most likely a paid for meal, with healthy but simple foods. Family members might choose to eat together at the center over a quick stop at a fast foods restaurant—at least on some evenings. The "latchkey kids" phenomenon would all but disappear for the children would have a healthy and stimulating environment within which to stay until their parents are finished with their workday.

In studying preconquest consciousness in isolated hamlets of New Guinea, Sorenson shares one way that a potential problem was resolved by a people who as infants remain in "continuous bodily contact with mothers or the mother's friend..." (Sorenson in Tribal Epistemologies, 1998, p.83)

"The following bit of oral history shows how a band of 'Fore'boys seduced even the aversive, warlike 'Awa', a people from an altogether different setting, way-of-life, and language family.

> One day, somewhat before World War II, two bands of youths, one Fore the other Awa, were ranging out from their widely separated hamlet homes into the dense uninhabited forest ranges that stood between these different peoples. It was the first time either group had ventured out so far. The Awa boys had darted from a side trail out onto a knife-edged promontory down which they were proceeding above the Lamari River, when they found themselves between the rear and forward elements of the Fore boys going out there too. With both front and rear blocked by Fore, the ridge sides at that point too precipitous to scramble down, they had no place to turn.They were hemmed in too closely to think of raising bows - or perhaps they were too young to think of it, or perhaps because they were so young their funny-bones got tickled, or the situation was so strange they simply went agog. For whatever reason, the antagonistic Awa nature didn't surface, and despite a gaping language barrier amity broke out.
>
> They compared bows and arrows (the Awa had the best), then food (the Fore sweet potato was an instant hit). They examined each other's different kinds of dress and compared physiques. When showers threatened, melding diverse building styles, they improvised a leaf-thatched shelter and spent the night close onto one another in the Fore sensual style. By morning they were bosom buddies.
>
> At first light, they were up and out along the ridge on a hunt together. They showed off their different hunting styles, bagged a tree-kangaroo, cooked and ate it with the remaining sweet potato. When they sparated to go back home, they made a date to meet at the shelter at next full moon. The Awa promised to bring arrows to exchange for sweet potatoes.
>
> Following this second meeting, two younger Awa boys, entranced by the prowess of their stronger new Fore friends, returned to stay with them in their hamlet for several days. Two Fore boys then went for a sojourn in the Awa hamlet of Yakia. They took a sack of sweet potatoes to trade for arrows.
>
> In this way the two gangs became good friends and built a boys'-house near the famous knife-edged ridge to stay in together. Soon that site became an entrpot for Fore-Awa trade, mainly arrows for sweet potatoes. A larger house was built to accommodate the flow. The Awa boys picked up Fore words, and the Fore, ever fond of playing with new expressions, picked up theirs. Soon all were speaking a Fore-Awa blend.
>
> Later, two Fore sisters married two of the Awa youths and took possession of the older boys'-house (which then became a women's-house). The just-built new boys'-house then became a men's-andboys'-house (by virtue of the marriages). With wives in residence, more gardens rapidly appeared. A sister of an Awa boy married his closest Fore comrade. So another women's-house was built, which she occupied with her unmarried Awa girl-friend (the 13-year-old sister of one of the original Awa boys). She soon married one of the Fore boys.
>
> In this way the first mixed Fore-Awa hamlet in the region came into being. As more cross-marriages occured, a genetic merging of those Awa and Fore began. More mixed hamlets came into being - on both sides of the Lamari. When the government arrived, they called those on the east side of the river, 'Awa', those on the west side, 'Fore' (Sorenson in Tribal Epistemologies, 1998, p.91-92).

Incorporated within my vision is the understanding that a child is already a marvelous being from the beginning, and we as responsible adults, are to guide these children and allow their deeper selves to emerge and flourish. I think/ feel that children are basically good, have a natural curiosity and every possible learning style; that they learn best when there is no fear; that a teacher's relationship with students works best when the teacher is a facilitator of the educational process; that a facilitator is also an important model for children; two or three age groups working together have an advantage over age-grade segregation and includes some scaffolding—assistance based on aptitude levels—for the younger students; standardized testing, tracking of students and standardized curriculum have no place in a holistic educational environment; mediation and conflict resolution have priority in disciplinary action; and computers are able to serve as facilitators of learning, but should be integrated with more tactile and experiental ways of learning.

Concerning problem solving, we now know that some young people are inductive in their approach while others are deductive. According to an article by Carol Foltz, Willis F. Overton and Robert Ricco, titled Proof Construction: Adolescent Development from Inductive to Deductive Problem-Solving Strategies, it was observed that there is a cognitive developmental progression from inductive reasoning to deductive. Other researchers consider inductive and deductive different problem solving strategies. If there is a bias that one way of reasoning is the right way, how does that effect the student? In a holistic environment, respect for the unique ways a student solves problems is an important consideration.

"While there is no doubt that severe impaiment in this area severly restricts one's functioning, there may be a wide range of activities still available to such individuals, and the value placed on their contribution will reflectthe values of the society as a whole. Locust (1988) gives an example of a mentally retarded boy who was the water carrier in a Hopi village until the Bureau of Indian Affairs insisted he go to school in the city. There Bear became homesick and violent, spending the rest of his life in an institution for the criminally insane. Locust concludes: 'Bear was in harmony in his village carrying water. His retardation was part of his harmony; the state hospital was not' (p.322)" (Harry, 1992, p.80).

We still do not understand how the brain works, what intelligence really is or how it is that we can think or imagine. With new models of brain functioning, it would be better to facilitate the exploration of how the brain might work based on these different models and to explore the process of thought from the perspective of just that—an exploration. There is no need to diminish the potential of our children by trying to promote limited perspectives and evaluate the students accordingly. Physicist David Bohm and Karl Pribram, a neurophysiologist, have promoted a holographic perspective of reality. The brain modeled as holograghic implies a different way of processing information than what is presently understood, and in sharing this information with young people, wouldn't they really be curious and want to know more? After all, brains are very personal. Wouldn't they be interested in how they think? Are these questions posed to children? Are they guided to explore their own thinking, and where and how it might be happening?

Educator Elaine de Beauport, author of The Three Faces of Mind, has developed a model of the brain's three major areas and ten intelligences. She says, in an article in Intuition Magazine, "Children who are flunking math were helped to visualize equations. After taking art courses, they could access numbers through images" (p. 26). The article goes on to state that, "DeBeauport effectively did away with 'learning disabilities' at her school and helped every student work to the top of his or her capacity" (p. 27).

"The Education for All Handicapped Childeren Act includes no equivalent of the parent advisory committees in bilingual or compensatory programs, although the law calls for state advisory panels that must include parent representation. In special education, then, parents' input is envisaged in terms of discreet events related to consent and partial participation in planning. The implementation of this mandate includes written parental consent to evaluation and placement, as well as an invitation to parents to attend annual and triennial review meetings with the multidisciplinary team and an annual individual planning meeting with a child's teacher. The language of the law itself makes it clear that its services are conceived within a medical model that casts students in the role of patients, and parents in the role of consumers of services delivered by experts who determine the truth about their children's learning potential and performance" (Harry, 1992, p.99).

RADFORD - Radford University brain scientist Karl Pribram, professor emeritus of Stanford University, says today's educational system is often unfair to young boys, who learn best by doing rather than listening. "Sitting in a classroom and listening is very unnatural for boys," says Pribram. "Boys want to get up in the tree and throw coconuts down at you," he says, only half jokingly. Pribram is convinced that, based on general brain differences, males and females learn best from different learning styles, particularly at an early age. Just as a person's face or body can grow at different rates, the brain tends to grow at an irregular rate. Pribram explains that male and female brains grow according to different patterns, with the brain's frontal developing more slowly in males than females. The frontal lobe is the part of the brain responsible for establishing priorities and deciding what's appropriate or practical, says Pribram. "Male brains develop from the back and work forward. Females start in front and work back." One academic study concluded that teachers tend to favor boys because they call on boys more often to answer questions. In actuality, they probably called on boys more often because they have to work harder to get boys to pay attention, says Pribram. Statistically, young school boys are identified as having behavior problems in far greater numbers than girls and they're much more likely to be diagnosed as having Attention Deficit Hyperactivity Disorder (ADHD). "One reason for that is that the current system is not designed for boys. Eventually, boys can catch up, but in the beginning it's very difficult for them and I'm afraid many simply give up and decide school isn't for them." Boys like to move, take things apart and put them back together again, says Pribram. "I remember when my son was very young, he took apart the workings of our refrigerator and put them back together again, except for one part. Boys like to learn through action, through bumping into their world and seeing what happens." A misdirected tendency toward action may be one reason why boys are more likely to commit violent crimes or be sent to jail. A recent study examined the effect of same-gender schools on females. The study found that many girls preferred same-sex schools, but there was no measurable academic improvement from being taught in an all-female environment. "That makes sense because young females have better language skills and our educational system is already language-dominant," says Pribram. "The best question is not whether same-sex schools can help girls academically, but whether we can help both boys and girls by expanding our approach to education." Language-dominant education, which requires students to sit still, is also disadvantageous to girls because it plays on their strengths without encouraging them to develop the spatial skills that can eventually help with abstract mathematics, says Pribram. "I think both males and females could benefit from learning approaches that require spatial manipulation," he says. "Boys would benefit because they would enjoy school more, and girls would benefit because education that involves action helps stimulate the part of the brain involved in developing mathematical skills. Under the current system, it's too easy for girls to rely on their language skills." Pribram adds that it's important to remember there are always exceptions to gender-based brain differences. "The brain is very malleable and responsive to outside stimuli," he says. "None of this is immutable." May 13, 1998 Media contact: Jeanne Johnson, (540) 831-5324

"Education is a meaningful encounter, sustained by interest, curiosity, and personal purpose. In this sense, education is not the acquisition of information, but a joyful, exhilarating and enriching exploration of the world and one's intricate relationships to it. For decades, holistic educators had defined education in this way, only to be dismissed as incurably sentimental romantics. But in the twentieth century, this insight of the holistic educators was first supported by the sophisticated thought of Dewey, and later by the empirically substantiated work of Jean Piaget, Howard Gardner, and dozens of other researchers who have explored the nature of intelligence, learning, and the functioning of the human brain. It is now obvious that human beings, children as well as adults, learn in a variety of ways, involving physical activity, imagination, emotional concern, and implicit connections to their physical and social (and spiritual) environments. Education defined exclusively as book learning is a patently obsolete concept" (Miller, R., 1992, p.157).

"William Torrey Harris, as superintendent of schools in St. Louis and later the U.S. Commissioner of Education, was the most influential American educator of the late nineteenth century. He vigorously advocated the view that the pupose of schooling is to support the established industrial social order. A staunchly conservative Hegelian, Harris asserted that the individual 'is totally depraved; that is, he is a mere animal, and governed by animal impulses and desires' unless disciplined by social institutions (in McCluskey 1958, 120). The mission of the school, to Harris, was to instill in children a subservience to authority and social order. The pupil must be taught first and foremost to conform his behavior to a general standard.... [He] must have his lessons ready at the appointed time, must rise at the tap of the bell, move to the line, return; in short, go through all the evolutions with equal precision.... Great stress is laid upon (1) puctuality, (2) regularity, (3) attention, and (4) silence, as habits necessary through life for successful combination with one's fellow-men in an industrial and commercial civilization. (in Tyack 1974, 43, 50)

Early in the twentieth century, this approach was enthusiastically adopted, with the trappings of scientific methodology, in the 'social efficiency' movement. Colin Scott, head of the Boston Normal School, made this bald statement of the social efficiency approach in his book *Social Education* (1908):

> It is not primarily for his own individual good that the child is taken from his free and wandering life of play. It is for what society can get out of him, whether of a material or a spiritual kind, that he is sent to school. (in Spring 1972, 56-57)

This is probably the clearest, most undisguised confession of this educational approach that we are likely to encounter. It is precisely this attitiude which separates most traditional educational approaches from the holistic view" (Miller, R. 1992, p.43).

"During the previous century, the middle class had begun to turn to schooling as a preparation for more lucrative commercial careers. As industrialization and urbanization transformed the nature of work, the schools became ever more indispensable to personal success. It seems that the public school crusaders were more concerned with trraining and acculturating the poor, the immigrant, and the working class: these were the immediate threats to the social order. But what culture did the reformers want to instill in these people, if not the competitive capitalist values of the middle class? An important part of the 'common' school ideology was that public scchools would ensure social cohesion by educating children of all classes together. The reformers apparantly believed that schooling the immigrant working class in Anglo/Protestant/middle class values would simply eliminate class divisions in American life; the immigrant children would learn from their classmates the benefits of hard work and thrifty habits. Then they, too, could participate in the race for wealth and status. Horace Mann expressed this faith in his Twelfth Report (1849), his final statement as Secretary of the Board of Education:

> According to the European theory, men are divided into classes, —some to toil and earn, others to seize and enjoy. According to the Massachusettes theory, all are to have an equal chance for earning, and equal security in the enjoyment of what they earn, (in Hugins 1972, 140-142)

Mann saw the public school as 'the great equalizer of the conditions of men.' This was the role that reformers would assign to the schools for the next century and a half" (Miller, R. 1992, p.32).

"In order to allow the full range of the personality to be expressed and nurtured, the progressive educators placed a heavy emphasis on the creative arts. Music, drama, poetry, drawing, sculpture, and a variety of crafts were the outstanding features of many progressive schools, and the subject of many articles in *Progressive Education* magazine in the 1920s.In contrast to minstream schools which set aside a few art projects per week where students execute assigned projects, in progressive schools the arts held a central and exalted place" (Miller, R. 1992, p.113).

Montessori Schools:
"The elementary (ages six to twelve) and then the adolescent years (twelve to eighteen) are characterized by their own developmental needs. Trying to learn basic skills after the absorbent mind period is like learning a foreign language, and imposes upon children an arid mental effort which breeds a certain disgust towards study and all intellectual instruction. (Montessori 1978, 95)

In the Montessori approach, since basic skills have been mastered at the concrete stage, the elemetary child is free to turn his or her imagination loose. All areas of human experience (history, mythology, technology) and scientific discovery (the whole universe itself) are included in Montessori's vision of 'cosmic education.' The teacher introduces self-correcting materials which lead the children to greater awareness of their environment" (Miller, R. 1992, p.128).

Waldorf Schools:
"Like Montessori, Steiner saw human development as an unfoldign from within, following a successionof distinct stages. Although they are in agreement on some facets of development, Steiner's conception is less focused on snsorial and cognitive growth and more thoroughly oriented to the manifestation of the inner spiritual being. From birth to around age seven, said Steiner, the child's energy is devoted to constructing its physical body, primarily through sensation, imitation, and activity — a non-cognitive 'impersonal onsciousness' (Harwood 1958, 16). The moral and psychological environment provided for the young child is vitally important, for the physical body will incarnate its qualities into the child's basic temperment. This parallels Montessori's idea of the absorbent mind; but Steiner opposed the teaching of cognitive skills as a diversion of energy needed for physical growth, which is the first task of the young child" (Miller, R. 1992, p.134).

Steiner saw the development of human nature as beginning with the physical body, then the inner life of the soul and finally the ultimate spiritual being.

The problem with alternative schools is that they are unaffordable by most families. Public schools can transform sufficiently to take on the qualities, and the look and feel, of some of the best of the alternative schools.

Another way that holism is expressed is through the concept of ecoliteracy; understanding how living systems work. Carole Cooper, director of Global Learning Communities understands so well what is most needed in a holistic learning environment. In her article, "Why Ecoliteracy in Schools?" she says the following: "Students are not empty vessels or raw products to be produced; they are living, growing people who come with their own knowing and the need to construct their own meaning ... Our purpose for schools in this new era must be to help students learn how to learn, to love learning and to see themselves as life-long learners." (Guide, p. 11)

The following is a description of an alternative school, which for 25 years has remained an extraordinary model and a public school at the same time. It is called George C. Soule School and is located in Freeport, Maine. It's relationship to community is a wonderful example of what is possible. The philosophy of Soule School states, "we believe that children need time to follow their interests, to experience success and failure—in other words, to give the child practice in some of the behaviors that make responsible adults" (Corcoran & Horn, p. 25). Each day there is a meeting where the children can voice personal problems, difficulties at school, accomplishments, etc. Their self-esteem is improved, listening to others is practiced and a sense of community is experienced. The school maintains a commitment to the democratic process. Field trips and nature study are well attended by parents along with their children. A former student and now teacher at Cape Cod Lighthouse Charter School says that in understanding the tenets of Soule School he is applying this wisdom to his own teaching. "... I find the creation of a student- centered, democratically run educational environment to be an exciting, soul-feeding experience for myself, fellow staff, and students" (Corcoran & Horn, p. 27).

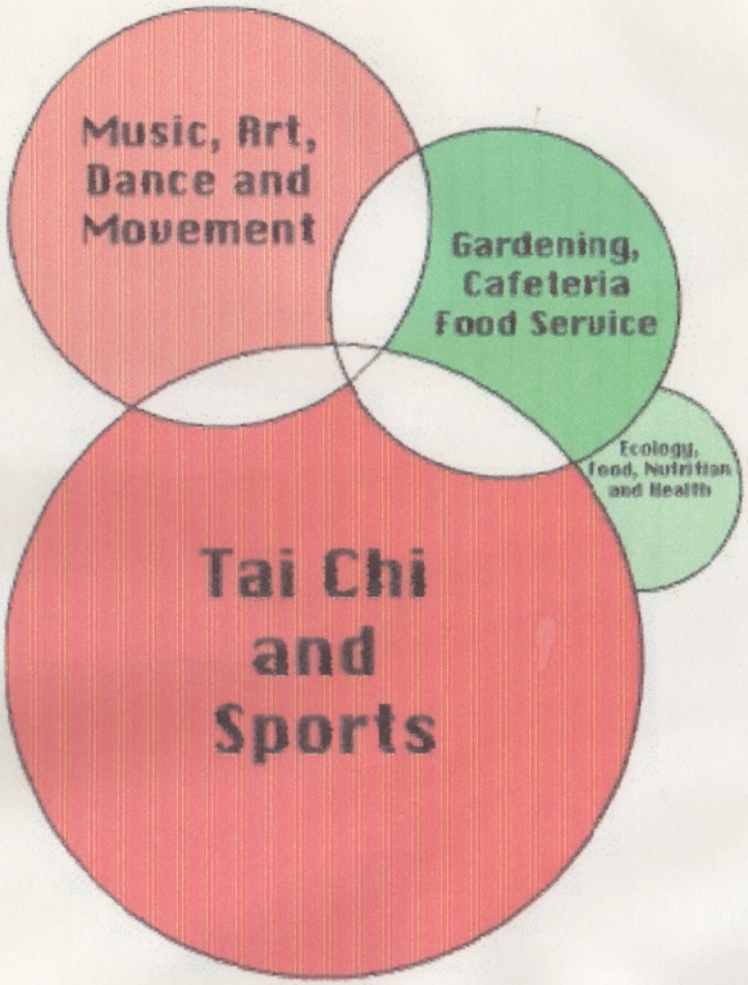
In a typical classroom of nearly 40 years ago, which in many ways remains unchanged, John Holt in How Children Fail describes problem solving strategies in the following way. "The strategies of most of these kids have been consistently self-centered, self-protective, aimed above all else at avoiding trouble, embarrassment, punishment, disapproval, or loss of status" (p. 73). In a holistic environment, fear has no place, for there is no need to control and coerce students to solve problems or to know the right answers.

Home schooling works best when there is local support and where parents/facilitators meet regularly to share and the children meet to play and otherwise socialize.

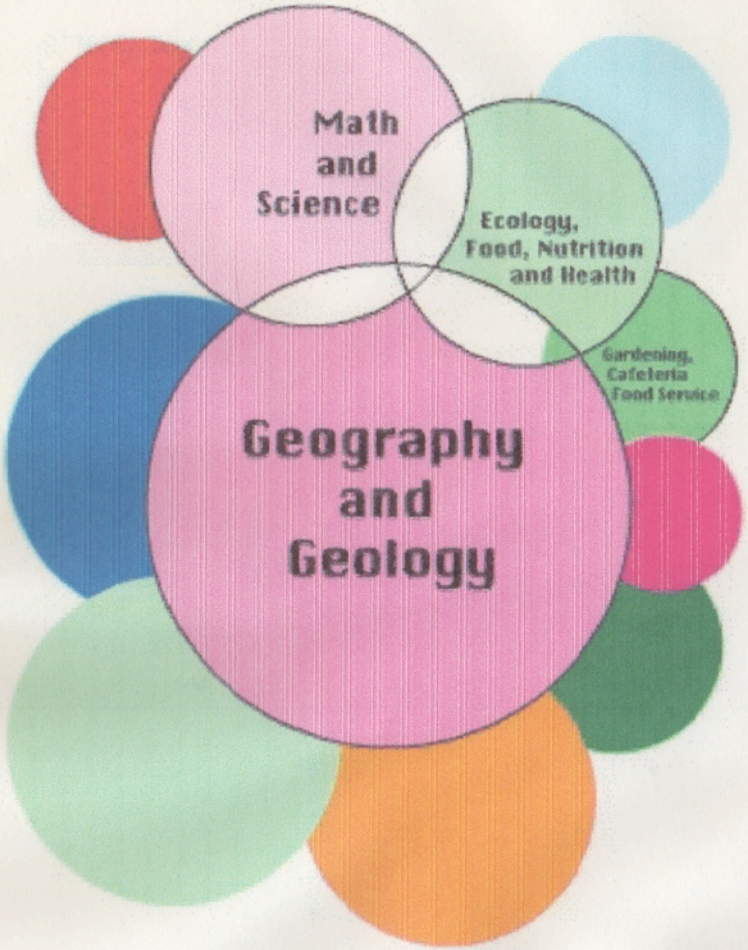
Charter schools offer an immediate way of converting a public school into a holistic, educational environment, and therefore the concept holds great future potential. I read the description of two charter schools provided by Cynthia Grutzik in her dissertation concerning the teachers of these schools and their relationship to policy and actual practice. As described by Grutzik, "Charter schools receive public funding, yet are released from many of the rules governing school districts. Policy makers expect charters to break the school system's monopoly over educational services, and to address problems of bureaucracy and over-regulation" (Grutzik, p. x). She is most concerned about whether the opportunity to decentralize is actually working in the two schools that are described. The main intent of charter school legislation in California is to "improve pupil learning by freeing teachers from certain regulations and increasing parent involvement" (Grutzik, p.2).

After reading interviews of teachers and administrators of the two schools described in Grutzik's dissertation, I felt strongly that in spite of some potential difficulties, such as start-up funding, the concept works well in practice, and each school is designed by the faculty and parents in their own way, thereby creating unique environments.

I also read Bob Beaudet's description of a new charter school in Florida for at-risk students, and the students seem to have an overall positive feeling about their school. The fact that it was set aside for at-risk students, who would then return to their previous high school after a few months, created some negative feelings.



Moving through the dance of life!



Geography—begin a journey anywhere. Everything is in relationship.

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