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Children's Safety Zone and Gateways to Life-Long Learing

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CHILDREN'S SAFETY ZONE AND GATEWAYS TO LIFE-LONG LEARNING

A Thesis Presented

by

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I dedicate this thesis to my children, John, Katie, and Michael, who are the essence of my being.

ABSTRACT

CHILDREN'S SAFETY ZONE AND

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The major purpose of this thesis is to examine the relationship between a psychologically safe environment, which the author has termed Children's Safety Zone, and positive learning structures. Together they can offer a practical new model for decentralized teaching. Educators create the conditions in which learning discoveries can be made; therefore, an exploration into children's motivations, achievements, learning abilities, intelligences, and values can affect how to effectively approach their learning discoveries.

It is the assumption of this thesis that education needs to produce learners who have encountered and acquired a sense of responsibility and control of their own learning. Motivating students to listen to their own ways of learning involves teacher receptivity and a shift of the center of attention to the child. The author's belief is that this type of learning can be a wonder-filled, life-long process, particularly when stressful input is decreased in the learning process.

Learning that is meaningful and child-based provides experiences that are not saddled with negative, stressful encounters that only end up sabotaging a child's cognitive operations. Creative visualization and the use of imagery can also be used to reduce the barriers of stress and anxiety.

Teaching of thematic units, with emphasis on processes, offers another possible means for making natural connections in the brain that facilitate discovery and learning. Teachers can further tie into the brain's natural pattern making potential by linking subject areas to one another, as well as by teaching across grade levels.

The author's own personal learning discoveries are perceived as new models for the role of educators as facilitators of learning. Finally, the relationship of learning to thought transformation is explored through the Dialogue Process, a unique approach to life-long learning. The author suggests that these elements can be woven together successfully, creating a new fabric made of a community of learners at all ages.

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CHAPTER I

INTRODUCTION

Recent research demonstrating the relationship between physical and mental growth, and mental maturation and readiness suggests that individual learning styles are the basic foundation of learning itself. Such a view leads to empowerment of the learner through development of his/her self-awareness, consciousness, imagination, and independent will since learning can be described as a process of individual discovery. The major purpose of this thesis is to examine the relationship between a psychologically safe environment and a positive learning structure as prerequisites for developing a practical new model for decentralized teaching.

Since educators create the conditions in which discoveries can be made, Chapter Two explores how motivation, achievement, learning ability, intelligence, and values can affect learning discoveries. Other essential elements in the discovery process are time, leisure, freedom, and lack of pressure (Holt 1989). Holt's concept of 'unifying' aptly describes the process of learning:

> Unifying is to discover the connection between what had seemed two isolated facets of existence; and it is a creative act, whether the field is art or science. No one can do this for someone else's mind. We can give them data. We can even tell them what the connection is. But we must not assume because we have told them, and because they can repeat what we have said, that they really know. They have to discover this for themselves. (p. 99)

Lynn Dhority's The A C T Approach: The Artful Use of Suggestion for Integrative Learning (1991) makes this theory of learning into a more concrete

possibility by providing specific integrative learning strategies, strategies which allow the great diversity of minds to open and make new discoveries. I utilize such strategies as a framework for practical proposals for a decentralized teaching style which has clearly changed the nature of learning opportunities in my own classroom.

Chapter Three reviews the research and educational implications of brain-based learning. Jane M. Healy (1990) in Endangered Minds: Why Our Children Don't Think states:

> Behavior changes brains and brains change behavior. What children do every day, the ways in which they think, and respond to the world, what they learn, and the stimuli to which they decide to pay attention -- shapes their brain. Not only does it change the ways in which the brain is used (functional change), but it also causes physical alterations (structural change) in neural wiring systems. (pp. 50-51)

My own teaching style has incorporated Healy's emphasis on the need for learning to be real for children in numerous ways. Motivating students to listen to their own ways of learning in my classroom involves several factors. Most importantly, I seek to make myself receptive and approachable to my students. I want each child to feel s/he is the center of attention as learning takes place. Practically speaking, I help students to develop self-management skills to use in class as well as in "real life." Also, my encouragement for students to appreciate and tolerate differences among all individual learning styles underscores my intention to support all learners.

Chapter Three also details Renate and Geoffrey Caine's (1991) advocacy of moving beyond simplistic, narrow approaches to teaching and learning. Their book, Making Connections: Teaching and the Human Brain focuses on recent information from the neurosciences that can help educators

understand their role in facilitating the brain's natural mechanisms more fully. Howard Gardner's (1983) work also offers theories on multiple intelligences which I explore further with the purpose of bridging recent brain-based research and the importance of developing strategies and techniques for a psychologically safe learning environment.

Chapter Four explores a still deeper level of life-long learning, the process of thought reflecting upon itself. The Dialogue Process, as envisioned by quantum-physicist David Bohm (1990), will be discussed as an inspiring, evocative tool promoting new levels of depth in communication and pioneering explorations toward individual and group understanding of their own thought processes. The Dialogue Process requires participants to have commitment and intentionality to create shared meaning, to learn to think collectively and to influence change. According to Bohm and Edwards, "The essential point is the understanding of the nature of thought and the perception of how thought works so that thought can be aware of what it is doing. The more insight into this question, the better" (1991, p. 172). As an educator beginning to examine her own thoughts, I envision dialogue as a highly potent force for learning and thus change.

Chapter Five illustrates how teaching across curriculum in thematic units can increase **Children's Safety Zone** during learning. Thematic teaching is one method which can utilize in-born mental mapping capacities. For example, the identical memory system is engaged when we use stories, metaphors, celebration, imagery, and music, as powerful tools for brain-based learning. Infusion of critical and creative thinking skills into the academic curriculum will also be discussed in Chapter Five, together with the importance of empathy awareness, anger expression, and impulse choices.

Such methodologies will be shown as integral to the creation of a positive learning environment.

As interest in the new atmosphere in my classroom has spread to other faculty members, I have become aware that the seeds of my own learning, so accelerated by participation in the Dialogue Process, are now rooting around me. Ultimately, this thesis proposes that education profoundly needs the greatly increased learning potential inherent in the Dialogue Process.

In our rapidly changing world, educators must respond to the reality that our environment shapes our brain and our brain shapes our environment. Chapter Six takes the possible avenues of insight and fresh perception about the nature of the brain and the life-long learning process, seen in the first five chapters, and suggests concrete forms that could emerge from this new awareness.

CHAPTER II

EMPOWERMENT OF THE LEARNER

Environment: Creating the Children's Safety Zone

The empowerment of the learner through the development of self-awareness, consciousness, imagination, and independent will combines well with the understanding that learning is a life-long process. The Critical and Creative Thinking Graduate Program at the University of Massachusetts Boston has been a catalyst in my transformation as a learner and as an educator. The new skills I have acquired have altered my entire frame of mind, transforming my professional and personal life. How the CCT Program has changed my life lies at the heart of this thesis.

The greatest change in my frame of mind is that I approach the role of teacher from the learner mode as well as the knower mode. Before my new perspective, I would approach the group of twenty-two students before me, asking "What do I know about these students?" Instead I need to appreciate the knower and learner in each child. I now ask "What can I learn from each child that will assist me in linking to their past experiences?" I realize that there is much for students to learn in the fifth grade experience.

Before the change in my self-awareness, I would feel an inner pressure and a demand to get the job done. Just as there are blocks in a neighborhood, and rows of "boxes" called classrooms in a school building, there are little boxes in daily blocks in a weekly planner book. I was a teacher with a curriculum to cover and a timetable to follow, with slots to get things done, certain things at certain times. I would be annoyed if the clock didn't match the schedule in the plan book. I allowed myself to remain within the

regimentation of the teacher's guide and allowed other externals to govern the pattern of the classroom.

From my old "knower" approach to teaching, students would write in workbooks to fill in the blanks. From my new "learner" approach, students write in journals, which allows them to write from their "knower" mode, putting down what they know and choose to share. In the first fifteen years of my teaching experience, I had the chalk and I wrote on the board, because the belief was that the teacher was the only one who "knows." Now I hardly ever write on the board, but instead the children write on the board, sharing solutions to problems with peers or developing webs to piggyback ideas.

I now find that it is not necessary to move sequentially in a rigid fashion. Topics within subjects of the curriculum are moved around according to the light bulbs going off in the learners. The approach is intuitive, unaware of time, and the children respond in the same way. The bell will ring and a comment is made "Oh, it's time for lunch!", and everyone is surprised. The approach is connecting, and the creative act involved, engages all. The shift of my attitude has allowed me to see students as knowers, not just learners.

In addition, in my own graduate studies as a learner in the middle season of my life, the commitment necessary to earn a graduate degree resulted in a new sense of personal anxiety. The unusual atmosphere of psychological safety within the CCT Graduate Program provided me with striking personal evidence that the climate of the classroom and the attitude of the teacher can create positive changes in learning. Through my own learning experience, I have come to believe that the learner at any level, elementary, intermediate, secondary, undergraduate and graduate, benefits greatly from an environment that is psychologically safe.

The attitudes of CCT teachers have also positively reflected Howard Gardner's theory of multiple intelligences, specifically his concept of personal intelligence. In Frames of Mind, Gardner (1983) examines the development of the internal mental reflection capacities:

> The core capacity at work here is **access to** one's own feeling life -- one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behavior. (p. 239)

Gardner continues by explaining further that another aspect of human intelligence turns outward:

> The other personal intelligence turns outward, to other individuals. The core capacity here is **the ability to notice and make distinctions** among other individuals and, in particular, among their moods, temperaments, motivations, and intentions. (p. 239)

A new sense of self emerges in this learning process at any age, as the window to the intrapersonal and the interpersonal forms of knowing is opened. The learner at the elementary, intermediate, secondary, undergraduate and graduate level requires a safe environment for this type of learning to occur.

Self-awareness

The A C T Model emphasizes just such an environment since its focus is accelerative, full-spectrum learning, a way for educators to become

masterful communicators and learning facilitators. In The A C T Approach Dhority (1991) details methods educators can use to establish an environment of safety for learning. The psychological safety involved in the A C T Approach came to me firsthand in my experience during Dhority's course, "Teaching Creatively" (1992). Dhority describes the most important factor in teaching as suggestion: "...suggestion is such a powerful tool to help students transcend their limiting self-concepts, beliefs and fears..." (1991, p. 51). Fear often prevents learners from discovering, risking and creating, and remains one of the greatest obstacles to overcome in the learning process. In order to grasp something "new", the learner must give up, or let go of previous information, concepts, or beliefs that hinder the feeling of safety in the world.

In Endangered Minds, Healy (1990) agrees:

> If the 'emotional' brain is preoccupied with fears or anxiety, it may fail to activate the proper cortical switches for attention, memory, motivation, and learning. High levels of stress can also change the fine chemical balance that enables messages to pass through all these systems; although the 'good stress', generated by exciting and manageable challenges, may enhance learning, a child who is emotionally stressed may literally have trouble getting the brain's juices flowing for academics. (p. 239)

One concrete way to facilitate safety in the classroom is to make changes in the physical environment itself, so that the changes suggest safety. For example, the structural arrangement of furniture can create a free, flowing pattern for movement. In my classroom, the teacher's desk is part of the learning center, with a computer center and a large discovery table. All

entailed the teacher's desk in front with teacher in control, students in 5 or 6 rows, all facing in one direction, looking at the back of the head in front of them. Children did not get into the teacher's space, because the desk was representative of the "knower" mode, and it was only for the teacher's use. It was a physical way of keeping the boundaries between the knower and learners.

In the new structure of the classroom, the children's desks are in an open, flowing arrangement. Children face one another in a circle formation, so that it is easy to interact. A safe place away from their desks is in the center of the room, with rugs, pillows, and stuffed animals. It is a "homey" area for students to read together, or chat, or share. There are many books, games, and puzzles at this center. This area is the pulse of the room; whereas before the focus was on the teacher's desk or the blackboard. A large portion of the weekly planning occurs in this center, when teacher and students are relaxed and possess clear vision.

The process of learning can be readily inhibited when fear-based, and therefore limiting beliefs become established in the learner's mind. The search for new learning always requires the learner to let go of past beliefs in order to acquire new possible truths. This is as evident in individual cases as in the general class environment. A learner, N. L., (initials changed to insure anonymity) came to my room last year fear-based and filled with anxiety. He was dyslexic, but extremely bright. He would cry when a shift was made from one subject to another, especially if he was not finished with the previous task. He would cry when sent to the Special Needs Resource Room. He had a history of crying every night about school in Grades Two, Three and Four. He was the second youngest in a family of six, and described by his mother as fragile and introverted.

I saw his fear of missing activities in the classroom while at Resource Room, along with his anxiety in the Resource Room, as signals of his terror. I acted as an advocate for N. L., stating that the stress was defeating any progress made in the classroom. Administrators heard my plea, and it was arranged for home tutoring after school to comply with the educational plan for N. L.

N. L. became a leader in our fifth grade classroom, especially in the area of science. He did extra credit science reports on his home computer, which he was willing and able to share with his peers. He gave oral presentations to younger students in Grade Two. His personality opened up. He became a different child. The school psychologist stated, "N. L. has blossomed like a flower in Grade Five. What a different boy!"

This year at the middle school in Grade Six, the parents of N. L. contacted me to request my input regarding his program. The sixth grade team recommended in September that N. L. be placed in a Resource Room setting for two periods a day. I wrote a letter advocating that N. L. stay within the normal routine. The Director of the Special Needs department heard my argument, and did not enter N. L. in a pullout program. To date, N. L. has been on the honor roll, and even went out for the football team!

The acquisition of new information, and thus the relinquishing of old information, can be a task difficult for the brain to accept, especially if the limiting belief assumes its own truth. The learning and subsequent unlearning of assumptions about reality is a complex process which I will explore in greater detail in Chapter Four. At this point it suffices to say that while a bridge between conscious and subconscious mental operations sometimes allows exploration of new information, ideas, and insights, often the learner resists, mostly through unconscious non-receptivity. The skillful use of suggestion opens a window into vast non-conscious resources of

energy potential that we all take for granted but seldom utilize in our teaching approaches.

Suggestion

I use indirect suggestion in my classroom through modeling some very specific behaviors. To help promote better skills in organization, I model for students the benefits of daily planning, as well as long-range planning. At the opening weeks of school, I create a graphic organizer with the students for the classroom goals for the year. A daily agenda is placed on the front board and reviewed each morning by all members of the class. Each child uses a daily chart to monitor his/her progress. A schedule of the specialists for music, art, media, physical education, as well as lunch and recess, is also recorded. Students keep daily journals to record personal responses to learning. I actively participate with the class as I write entries in my own journal along with them. I provide time for reflection, for the private reading of journals, and review of students' own time organizers to assess their own accomplishments.

In The Aquarian Conspiracy: Personal and Social Transformation in the 1980's, Ferguson (1980) cites teacher-caused learning disabilities as "allopathic teaching." Ferguson postulates that:

> Dis-ease, not feeling comfortable about ourselves, probably begins for many of us in the classroom. The child who may have come to school intact, with the budding courage to risk and explore, finds stress enough to permanently diminish that adventure. (p. 283)

Ferguson (1980) states further:

> Most of us have unfinished business with school, and this residue of anxiety may intimidate us yet on some level of consciousness; it may forever pull us back from challenges and new learning. (p. 283)

Because of the pressure society and family impose on students outside of school, it has become imperative that today's educators relieve the stress in students' school lives. Educators need to demonstrate and model their own love of learning to students in as stress-free a manner as possible. We are familiar with many stress producers normally found in classrooms: fear of tests, competition for grades, "correct" SAT scores, reinforcement given only to "right" answers, and social ridicule for "stupid" questions and/or responses, not to mention the social isolation of special needs children, and at home, parents measuring how good they are as parents by how well their children perform in school.

Both cognitive learning and affective learning have validity, and there is still little social recognition or integration of these two learning modes. Using my own emotions skillfully as they arise in the classroom, I can model and "suggest" (Dhority 1991, p. 54) for students that their own feelings are valid and valuable. In more traditional aspects of the curriculum, such as studying literature which will be discussed in Chapter Five, students' own feelings can be incorporated by using a responsive journal, another opportunity for personal feelings to be validated, this time integrated into a more academic context.

Consciousness

Transpersonal education, with its roots in recent psychological innovation, focuses on transcendent capacities of human beings. Ferguson (1980) states:

> In transpersonal education, the learner is encouraged to be awake and autonomous, to question, to explore all the corners and crevices of conscious experience, to seek meaning, to test outer limits, to check out frontiers and depths of the self. (p. 89)

The mystery of each individual is given its full dignity in transpersonal education. The Dialogue Process, discussed later in this thesis, also offers educators the opportunity to explore this mystery of learning within the framework of one's own personal assumptions about what is "true."

Morton Hunt's work in cognitive science, reflects a creative hybrid mix of psychology, computer science, psycholinguistics and several other fields. According to Hunt (1982):

> The sheer intricacy of the neuronal pathways by which the brain transmits and processes information is one of the everyday marvels of the human brain that we take for granted. The mind's huge information-storage capacity is an absolute prerequisite of human thought. Thinking, is it problem solving? is it pure reasoning? is it decision making? All other higher cognitive processes -- perception, memory, learning, inference, concept formation, are these outside of thinking proper? Call thinking 'all that goes on...[in the mind]...between input and output.' (p. 22)

Hunt estimates that the circuitry in the human brain probably has sixty times the informational complexity of the entire U.S. telephone system, illustrating that the intricacy of the neuronal pathways and the mind's ability

to store information are two functions of the brain that need further exploration.

Hunt (1982) distinguishes the mind from the brain thus: "... the brain is what is, the mind is what the brain does" (p. 81). If we picture a man at the dinner table preparing to eat, we can notice how his mind allows him to choose and prefer some foods while he rejects others. Similarly, the mind decides to accept or deny pieces of new thought presented for its review during any given learning encounter. The mind appears to receive new information, but will it truly digest and absorb it? Learning is a more complex process than selecting and digesting foods, yet there are basic similarities.

Cognitive science also relates what the mind "forgets" to the effect of perceived stress. Hunt (1982) states that:

> ... stressful input takes up most of the mind's conscious equipment and so impedes the retrieval of information from long-term memory. (p. 89)

It follows that if we decrease stressful input, retrieval of information from long-term memory will be easier, and the possibility of learning more successful. Hunt (1982) believes that we perceive and remember nearly everything in terms of what we already know. We do not remember what our senses perceived but "what our minds made of it" (p. 96). Remembering new experiences thus relates more directly to existing memories than to the number of times something is experienced, how recently we have experienced it, or how much interference the mind creates. Thus, a learning environment that is psychologically safe improves the operational ability of the mind's conscious equipment. Needless to say, learning that is

meaningful and child-based then makes for early learning experiences that are not saddled with negative, stressful encounters that only end up sabotaging a child's cognitive operations. The physical changes in my classroom were designed to empower students, putting the child at the center of attention, free of fear about new discovery. Thus, we leave the child with his or her cognitive power fully available to use in his learning experiences. Healy (1990) states:

> I would contend that much of today's school failure results from academic expectations for which students' brains were not prepared -- but which were bulldozed into them anyway....The brain grows best when it is challenged, so high standards for children's learning are important. Nevertheless, curriculum needs to be considered in terms of **brain-appropriate** challenge. (p. 69)

When Rene Descartes in the sixteenth century noted, "Cogito ergo sum" (I think, therefore I am.) (p. 65), he underlined the importance of thought in determining our identities, i.e. who we think we are. Thus, when a person says, "Oh that's just the way I am," the very words reflect his/her thought conclusions, viewed by cognitive scientists as the reactions of the brain's circuitry to its own processes.

Humankind has attempted to understand thinking for all of recorded time. What are we doing when we are thinking? The thinking process goes on so rapidly that we can seldom consciously attend to it. It involves complexly woven feedback effects. More attention needs to be paid to thinking about our thinking -- thus, the new field of metacognition. Later, in this thesis, I will explore the Dialogue Process as just such a group forum, a new possibility of taking a look at THOUGHT in action.

Hunt (1982) argues that the mind is to the nervous system as rotation is to the wheel; if so, there is little need to re-invent that wheel or its rotation as we begin to think about our thinking. However, at the very fast pace society now moves, how can people become involved in metacognition if the pace is already set at such automatic high speed levels? To look at thought requires a shift of pace into that of reflection rather than accelerated motion. A more encompassing awareness must be brought to bear on the examination of what our thinking is doing.

Bohm and Edwards (1991) suggest the possibility that we can change the nature of our thinking:

> The essential point is the understanding of the nature of thought and the perception of how thought works so that thought can be aware of what it is doing. The more insight into this question, the better. (p. 172)

Just as the Dialogue Process is a banquet table where food for thought can be presented, a classroom is an arena where food for thought can be served daily to the open menus of students. If emphasis is placed on the discovery method of teaching, we can facilitate the learner to write her own script using the menu of her mind. Empowering the learner with her own choice reduces the fear and anxiety around the "right" choice or answer. Since real learning involves the process of discovery, the essential elements of time, leisure, freedom, and lack of pressure can become some of the classroom conditions that allow discoveries to be made.

In Dhority's (1991) methodology such practical strategies for teachers are outlined. His decentralized teaching style offers empowerment to students by pulling the emphasis away from what the teacher says to what the learning experience offers. The A C T Approach also proposes a change of

focus to "teaching from within" (p. 55). Human beings have deep dependency on others and needs for acceptance and love, for belonging, and for a sense of their own importance and worth. When teachers offer individuals a feeling of security, of being guided rather than "told", students are led toward wisdom and power, steps on a path to empowering individuals to take these steps for themselves.

Creative visualization and the use of imagery can also be used to reduce the barriers of stress and anxiety. I have my students visualize themselves as the letter L, standing tall with both feet planted on the ground, ready for Living, Loving, Laughing, Listening, and Learning. This activity is a form of direct suggestion that can open the doors which stress and anxiety may have closed. (I hope they will do all of these L's actively in their lives.)

Learning also involves engaging the imagination, the ability to create possibilities for ourselves beyond our present reality. Imagining my mind's eye at the center of my imagination, I see that I AM IN AN IMAGE which is "thought." When my mind's eye falls within the circle of image-inary influence, it "sees" that change is possible. It is through our ability to imagine and visualize that we can begin to see ourselves as learners, that is, as agents and objects of change. Asking students to visualize themselves in this capacity allows them to reflect on themselves as learners.

Bohm (1990) postulates that all thoughts are from our past experiences; while actual thinking is in the present and is proactive. Thus, all thoughts involve "thinking twice" (p. 12). According to Stephen Covey (1989) we all have an inherent freedom to choose, a freedom that lies somewhere between stimulus and response that is, something between thinking done twice. Thought does not have to remain trapped in its own creation. Covey says:

> Children need to be empowered by using the human endowment of self-awareness to discover a fundamental principle about the nature of man. Between stimulus and response, man has the freedom to choose. Within the freedom to choose are those endowments that make us uniquely human. In addition to self-awareness, we have imagination, conscience -- a deep inner awareness of right and wrong, of the principles that govern our behavior, and we have independent will -- the ability to act based on our self-awareness, free of all other influences. (p. 70)

Covey's (1989) model is proactive and begins with early dependence, leading then to independence, and further, to interdependence. In the classroom, children are dependent on teachers to set the stage for learning. Tasks can be offered to stimulate interest in many areas of the curriculum. The lead by the teacher as mentor towards fascinating possibilities of connection-making allows students to pursue areas of interest selected by them. This independence can then lead to an interdependence between teacher and student where both are exploring new information. Each day can permit vast opportunities for learning by those invested in this discovery process. As educators, if we value children as storehouses of varied past experiences, then entering children's lives as facilitators who can increase shared meaning in the classroom can be our goal.

For example, T. G. is a bilingual student in my classroom, who was experiencing difficulty with inferential comprehension during reading. She is a high-level achiever who sets great expectations for herself. She would become concerned with her inability to express, either verbally or in written form, the inferred meaning of text. During one of our writing conferences, T. G. shared her feelings. We brainstormed some possible solutions, and concluded that T. G. could try expressing her deepest level of understanding

of the literary piece through the medium of art. Her outstanding talent in the art form allowed T. G. the perfect means to clearly express her inner self.

Daniel C. Dennett (1991) in Consciousness Explained states:

> Wherever there is a conscious mind, there is a point of view. This is one of the most fundamental ideas we have about minds -- or about consciousness. A conscious mind is an observer, who takes in a limited subset of all the information there is. An observer takes in the information that is available at a particular (roughly) continuous sequence of times and places in the universe. (p. 101)

Let us consider the classroom as one sectioned area of the child's universe. As the experience of moving from dependence to independence to interdependence comes to be realized in the classroom, the child's universe, therefore, also increases.

The child's mind contains an observer, a conscious mind that takes in subsets of reality during learning. Through imagery, metaphor, and visualization, wonder can be maintained and expanded, as children discover that learning can be a wonder-filled, life-long process.

CHAPTER III
RESEARCH ON LEARNING

The Origins of Language

As previously stated, learning is a life-long process that requires humankind to engage in thought. In order to share thought, human beings have developed a complex system known as language. Susanne Langer (1942) states:

> Language is, without a doubt, the most momentous and at the same time the most mysterious product of the human mind. Between the clearest animal call of love or warning or anger, and a man's least, trivial word, there lies a whole day of Creation -- or in modern phrase, a whole chapter of evolution. In language we have the free, accomplished use of symbolism, the record of articulate conceptual thinking; without language there seems to be nothing like explicit thought whatever. (p. 103)

I intend to examine the origins of language, communication, and explicit thought with reference to recent brain-based research. Langer's work involves communication between apes. "Apes express their emotions, indicate their wishes, and control one another's behavior through suggestion" (p.104). Chapter Two underlines the power of suggestion in the creative process. More attention needs to be placed on suggestion in the acquisition of new knowledge because suggestive power exists in many processes. For example, the process of acquiring language, the learning process, the creative process and the discovery process all respond to the presence of external elements of suggestion. The necessary connection

between the above processes threads throughout this thesis, culminating ultimately in possibilities of group learning processes such as dialogue.

Needs of the Brain

Parents and teachers feel helpless in the storm of society's pressures. It seems a war is being waged where the old tactics for family structure and child rearing are not working. The classroom strategies of yesterday are hard pressed to meet the demands of America's young. Healy (1990) states:

> And while most educators -- many of whom are parents themselves -- would like to help, too many do not understand what is needed. Only when both groups become aware of what is really happening to children today can we all stop blaming each other and start working on solutions. (p. 45)

Technological and social changes of today have propelled us into a world of great uncertainty. The young have a good handle on "information age" devices; while adults are relinquishing control to them. In my own home, controls for the telephone answering machine, the VCR, the microwave and the automatic light device are all set by my young adult children. Are we rearing a generation of different brains? Healy (1990) proposes:

> We are rearing a generation of 'different brains' and that many students' faltering academic skills -- at every socioeconomic level -- reflect subtle but significant changes in their physical foundations for learning. These fundamental shifts put children in direct conflict with traditional academic standards and the methods by which they are usually conveyed. (p. 46)

According to Healy, the abilities for language-related learning, such as reading, writing, analytic reasoning, and oral expression, as well as sustained attention and problem solving, are at particular risk.

Neural Plasticity

The classroom is hushed as the lights dim and as the shades are drawn. The children are seated on the floor in a circle formation. A candle is lit while a tom-tom is drummed. The talking stick is unwrapped from its protective cloth, ready to be passed among the group. I reflect for a moment that I have never heard a group of fifth graders this quiet. The scene has been set for our weekly tribal council meeting. It is an opportunity to share thoughts and feelings about the week at school. This experience relates to neural plasticity in a way that a teacher lecturing to the class about American Indian culture can never do, because learning in contexts like these becomes part of one's total experience.

Brain plasticity means that the physical structure of the brain changes as the result of experience. Data comparing brain size and weight of rats reared in standard cages to animals who lived in enrichment cages demonstrates that:

> With increasing amounts of environmental enrichment, we see brains that are larger and heavier, with increased dendritic branching. That means those nerve cells can communicate better with each other. With the enriched environments we also get more support cells because the nerve cells are getting bigger. Not only that, but the junction between the cells -- the synapse -- also increases its dimensions. These are highly significant effects of differential experience. It certainly shows how dynamic the nervous system is and how responsive it is to its internal and external surroundings. (Healy 1990, p. 47)

Healy (1990) describes the influence of suggestion on the neural networking fabric of the brain itself, suggesting that the structure and function of the brain are actually inseparable. All brains consist of two types of cells, nerve cells, called neurons, and glial cells. The neurons number in the billions and serve to connect themselves together in flexible networks to fire messages within and between parts of the brain. The glial cells that surround the neurons provide the catering service for the nervous system. The glial cells support and nourish the neurons as they go about their delicate task of creating, firing, and maintaining the connections for thinking.

Healy (1990) explains that the shape of the average neuron is like the palm of your hand with fingers extended. The palm represents the cell body, with its central nucleus, and your outreaching fingers are dendrites. Dendrites are microscopic projections that extend in treelike formations to act as intake systems that pick up messages from other neurons and relay them to the cell body. When a message reaches the cell body, visualized as the palm, the message would travel down your arm, which would represent the axon, or output system. When it reaches the end of the axon, it must jump across a small gap called a synapse before being picked up by dendrites from a neighboring neuron.

> This primordial intellectual leap is facilitated by chemicals called neurotransmitters or neuromodulators. It is repeated untold billions of times as this vast array of potential goes about the business of daily mental activity. The strength and efficiency of synaptic connections determine the speed and power with which your brain functions. The most important news about synapses is that they are formed, strengthened, and maintained by interaction with experience. (p. 52)

The interaction between teacher and student in the classroom environment must create positive experiences for such learning to take place. Chapter Five explores the teaching of thematic units as a possible means for making connections in the brain.

The need for more conversation between teacher and student for these connections to occur is evident. Learning requires communication between teacher and student. A model for communication consists of a triad: a speaker, a message, and a listener. Communication means the interrelatedness of these three elements.

Healy's (1990) research describes language processes as using "experience-expectant neurons" (p. 54) in the brain.

> Language development is heavily experience dependent....[T]he brain very selectively can be shown to respond to its particular experiences....It's certainly quite conceivable that a major difference in the way in which kids grew up would lead to a major difference in brain organization for information processing....Is it possible that the pace of our contemporary life, when many children are constantly being stimulated from outside so that they have little time to sit, think, reflect, and talk to themselves inside their own heads -- could that make a physical difference in their brains? (p. 55)

I feel that the answer to Healy's question is an unavoidable yes. Healy's personal belief is that most of the worrisome changes now occurring in children's brains are caused by intellectual environments. She refers to neural plasticity as nature's double-edged sword:

> The very flexibility of systems that rely on experience for their

Competing Neurons

Why does nature overendow us with brain cells? Healy states that this apparent wastefulness is our assurance of adaptable mental equipment.

> The cortex is the control panel for processing information at three levels:
>
> 1. receiving sensory stimuli
> 2. organizing them into meaningful patterns so that we can make sense out of the world
> 3. associating patterns to develop abstract types of learning and thinking
>
> These later-developing 'association areas,' so critically important for planning, reasoning, and using language to express ideas, are the most plastic of all; their development depends on the way the child uses his or her brain at different stages of development. (p. 56)

Educators create situations where students can make associations, and what happens in the learning discoveries of one child can be very potent in the learning of others. For example, the children discussed previously, went through internal changes that have clearly brought new learning to their peers. Previous expectations and assumptions were revised at the group level of interaction. Students' past perceptions about learners like N. L. were that "he just doesn't get it," but if diversity of learners is brought to the attention of all students, then an appreciation of each child's strengths can be seen. T. G. in her artistically talented way expresses her difficult task of inferential comprehension with paint and brush rather than pencil and paper. As the next testimony will show, the loving nature of C. M. is valued by students this year, whereas in the past, he was viewed differently by peers. This kind of associative learning is natural for the brain, and the more we can create

experiential environments where things feed each other, the richer the learning possibilities become.

Environments Produce Connections

New kinds of instruction can more fully use the brain's capacity to learn. Findings by Caine and Caine (1991) challenge the belief that teaching can be separated into the cognitive, affective, and psychomotor domains. This is because the brain does not separate emotions from cognition, either anatomically or perceptually. Genuine understanding and transfer of learning can be achieved, however, through a framework for a more complex form of learning that makes it possible for us to organize and make sense of what we already know.

Caine and Caine (1991) states that the brain has a virtually inexhaustible capacity to learn because it comes equipped with a set of exceptional features:

> the ability to detect patterns and to make approximations,
>
> phenomenal capacity for various types of memory,
>
> the ability to self-correct and learn from experience by way of analysis of external data and self-reflection, and
>
> an inexhaustible capacity to create. (p. 3)

We can make use of the brain's ability to detect patterns and to make approximations in our school curricula. Educators can tie into pattern making potential by linking subject areas to one another. The child, as an observer who is taking in subsets of reality during learning, requires

"embeddedness" (Caine and Caine 1991, p. 36). This is a sense of wholeness that emerges out of seeing how academic subjects relate to each other and how human beings relate to the subjects. Thematic teaching, which draws across established curriculum areas using common ideas or themes as connecting links, and the integration of the curriculum are two approaches to learning that typify the type of "embeddedness" that can stimulate the natural pattern making potential of the brain.

> Education needs to accommodate both the needs and design of the human brain. The overwhelming need of learners is for meaningfulness. Meaningful knowledge is anything that makes sense to the learner. It is impossible to deal with complexity and change and to make sound judgments if the tools and knowledge at our disposal do not make sense. Understanding a subject results from perceiving relationships. The brain is designed as a pattern detector. (p. 7)

Suggestion is the process through which an idea is brought to the mind because of its connection or association with an idea already in the mind. Brain-based learning acknowledges and encourages the brain's ability to integrate vast amounts of information. It involves the entire learner in a challenging learning process.

The ability to self-correct and learn from experience by way of analysis of external data and self-reflection is a feature of the brain that gets interfered with by perceived threat. Leslie Hart (1983) calls this perceptual narrowing "downshifting."

> When we downshift, we revert to the tried and true -- and follow old beliefs and behaviors regardless of what information the 'roadsigns' provide. Our responses become more automatic and limited. We are less able to access all that we know or see what is really 'there'. (p. 64)

Educators need to create an atmosphere of safety in the learning environment so that downshifting is decreased.

> Downshifting appears to affect many higher-order cognitive functions of the brain and thus can prevent us from learning and generating solutions for new problems. It also appears to reduce our ability to see the interconnectedness or interrelationships required by thematic thought processes. (p. 64)

Emphasis on failure by educators causes this downshift. A student, C. M., entered my classroom in September filled with anxiety and negative images of himself. Previous experiences had told him only of his weaknesses. He would not wear his glasses, or pick up his pencil, or attempt to participate in classroom activities. Testing in Grades One and Two labeled him as a Prototype 3, requiring 2 - 3 hours of Resource Room time each day. His past three years in school had been fragmented and frustrating for him. C. M. has benefited from the atmosphere of safety in my classroom by allowing him to express his thoughts and feelings in a verbal arena. Emphasis on his verbal strengths has encouraged him to accept and work with his weaknesses in the written language arts form.

The brain's inexhaustible capacity to create needs to be a primary focus in education. The future needs individuals who can govern themselves. Caine and Caine (1991) postulate:

> Tomorrow's successful employees will have to be problem solvers, decision makers, adept negotiators, and thinkers who are at home with open-endedness, flexibility, and resourcefulness. They must be able to deal with uncertainty, complexity, the global village, the information explosion, other technologies, and many different cultures -- and still maintain a set of values that foster an adequate degree of individual stability, integrity, and social harmony. (p. 14)

Education cannot continue to produce students who have acquired a store of nontransferable facts. Education needs to produce learners who have met with and acquired a sense of responsibility and control. In a creative learning environment, each learner controls and is responsible for her own learning. Confidence in risk-taking is established because mistakes are acceptable. The more we approach meaningful, challenging, and relevant learning in the classroom, the more likely that children of all types will learn well (Hart 1983).

CHAPTER IV

THE DIALOGUE PROCESS

Understanding Dissolves Isolation

In order to increase understanding among learners and to address the larger issue of the threat of fragmentation and isolation within humankind, we need to explore alternatives for clearer communication and to begin to reflect about what our thought is doing. The Dialogue Process (Bohm 1990; Dhority 1994) is such a tool.

Gardner's (1983) Multiple Intelligences Theory provides a link between current research on the brain, Linguistic Intelligence, and the potentials of the Dialogue Process. Gardner focuses on those domains of expertise in which language itself is at the fore (e.g. the expressive writer, the novelist, the essayist, together with the poet, the scientist, and scholars.) The dependence of those involved in such pursuits involving language is necessary, Gardner explains, not only as a source of what they study, but also as a means for conveying their conclusions:

> But in most societies, for most of the time, and most strikingly in a complex society such as ours, language is as often as not a tool -- a means of accomplishing one's business -- rather than the central focus of attention. (p. 96)

Before we can explore the Dialogue Process, we need to grasp the importance of Gardner's (1983) emphasis upon language as a tool of communication:

> While language can be conveyed through gesture, and through writing, it remains at its core a product of the vocal tract and a message to the human ear. Understanding of the evolution of human language, and its current representation in the human brain, is likely to fall wide of the mark if it minimizes the integral tie between human language and the auditory-oral tract. (Gardner 1983, p. 97)

The centrality of the auditory -- and oral -- elements in language is echoed by Ferguson's (1980) research on the brain and consciousness. She outlines the communication problems resulting from the specialized discoveries in many varying realms of science: brain research, physics, molecular biology, research on learning and consciousness, anthropology, and psychophysiology. Ferguson (1980) postulates that scientific specialization has created substantial problems in communication, including "the utter strangeness of the new worldview" (p. 148).

> We are required to make paradigm shift after paradigm shift, to drastically alter our old beliefs and to see from a new perspective. It has been said that science replaces common sense with knowledge. Indeed, our most advanced intellectual adventures carry us into wonderlands beyond the boundaries of logical, linear understanding. (p. 148)

Thought and Language

Our use of language can trap us into broken ways of living. For instance, since the subject-predicate structure of our English language molds our thoughts, this very premise thereby constrains us to think of everything in terms of this simple cause and effect framework and its assumptions. We must realize the limitations that accompany our use of words, and the

barriers they necessarily create because language frames our thoughts. As Ferguson states,

> Ordinary language is inadequate to deal with the nonordinary. Words and sentences have given us a false sense of understanding, blinding us to the complexity and dynamics of nature. (p. 149)

If we are to understand ourselves and the world we live in better, humankind must take an approach that is less specialized and more holistic. An example is the type of change in staff procedure that I recommended last year when I outlined the need for N. L. to remain in the classroom rather than leave the group for Resource Room services. In order to prevent his safety zone from being disrupted by the very sources trying to help him, our Special Needs Team was able to arrange for home tutoring.

An acceptance and appreciation of the findings on brain-hemisphere specialization can also contribute to understanding the relationship of left-brained language abilities in relation to our whole brain thought processes. Ferguson (1980) describes nonlinear understanding as being more like "tuning in" (p. 150) than the traveling from point to point that characterizes left-brain activities:

> When the left brain confronts the nonlinear dimension, it keeps circling around, breaking wholes into parts, retracing its data, and asking inappropriate questions, like a reporter at a funeral. Where, when, how, why? We have to inhibit its questions for the moment, suspend its judgment, or we cannot 'get' the other dimension, any more than you can see both perspectives of the optical-illusion staircase at the same time -- or be swept away by a symphony while analyzing the composition. (p. 151)

Brain-based research in Chapter Three indicates that the brain's workings are complex beyond our comprehension. Ferguson sees the brain,

mind, and body as a continuum; such a continuum suggests that having made these important linguistic distinctions in themselves has limited our understanding of thought. Through metacognition, however, we can explore ways to move more consciously into utilizing the brain's holistic talents.

The Nature of Dialogue

I participated in a class on The Dialogue Process at UMASS/Boston in 1993. A core group of students from that class continued to meet informally for another semester beginning the following September. My experiences of examining my own and others' thought through the Dialogue Process have profoundly impacted my life and my attitudes toward life-long learning, and, as a result, has affected my teaching strategies. Dialogue has encouraged me to move from the knower mode into the learner mode, a step forward which has elevated me from an instructor of information to a facilitator of discovery.

Developing further awareness about our thought means that each individual must claim ownership and responsibility for his or her ability to think and the possibilities of actively monitoring that thinking. Thought in our daily lives (our ideas, our reactions, our hopes, our pleasures, our fears), in fact, determines how we act, and how we communicate with each other. In On Dialogue Bohm (1990) suggests that shared meaning is the basis of culture and society. Thus, the new potential of Dialogue might be described as creating meaning more consciously, so that culture and society can formulate itself anew:

> ...A stream of meaning flowing among and through us and between us. This will make possible a flowing of meaning in the whole group, out of which will emerge some new understanding. (p. 1)

Learning to utilize the Dialogue Process means seeking to move beyond any one individual's understanding toward building collective understanding and meaning, which is the greater objective of Dialogue (Teurfs and Gerard 1993). To accomplish this, Dialogue purposely slows the fast verbal pace at which most groups interact by having participants practice deeper levels of listening, pausing, and reflecting. Open-endedness, the letting go of the need for specific agendas and results, also differentiates what can happen in Dialogue from our usual communications which focuses on the decisions waiting to be made, and the actions needed for our objectives to be met. Furthermore, Dialogue makes it possible for us to participate in a new type of community-based culture, one of cooperation and shared leadership among all members (Teurfs and Gerard 1993). It moves groups from individuals depending on leaders and member competition to increased collaboration and inclusion. As such, dialogue thus becomes an innovative, discovering, moment-to-moment communication process. Dialogue is the exchange over time among a group of people intentionally gathered to learn something that deeply educates: how to think together -- critically, creatively, and compassionately (Dhority 1994).

Core Skills for Dialogue

According to the excellent, practical summary of Dialogue practices by Teurfs and Gerard (1993), the successful implementation of Dialogue at the organizational level is based upon the development of individually pursued thought transforming activities. These writers include the development of the following skills as a baseline for practicing dialogue: suspension of judgment, listening receptivity, identification of assumptions, and inquiry

and reflection. These core skills function in multiple ways, jointly creative in evolving moment-to-moment interactions, becoming:

> ...the particular environment within which Dialogue can unfold, and also these skills can be seen as an outgrowth of Dialogue itself as it progresses. (Teurfs and Gerard 1993, p. 7)

These dialogic skills reinforce each other much like the process of digestion and good nutrition affect and enhance one another.

Suspension of Judgment

A basic foundational concept in Dialogue is the suspension of judgment. As Teurfs and Gerard argue, in order for us to relate to the world:

> ...we collect data, we organize it, we make decisions and we act....Judgment enters the process at many points....We judge/evaluate incoming data, sorting what to keep, what to throw away, what is valuable....Judgment is an inherent part of how we function relative to our environment. (p. 7)

These judgments, recorded as thoughts, accumulate in our minds over time, as we pass from childhood into adulthood, and are stored in our personal "databanks" (p.7). Our every perception is based on the data we absorb and past judgments already resident in our databanks. Teurfs and Gerard agree with Bohm: "Thus, our perception of current reality is always filtered through "old data" (p.8).

The old data we use are clearly helpful, and even necessary, because they allow us to act without re-thinking our every move. Really thinking about something takes time. Thought patterns already recorded work with

great speed (which is both good and bad). Quick thought means we can act quickly, however, as Teurfs and Gerard (1993) point out,

> That it is based on past data means that our lightning-speed responses might more accurately be called 'reactions', unlikely to yield any new approaches. New perspectives require a span of time for thinking to occur. (p. 8)

When we practice Dialogue, we attempt to look more carefully at our databank and its current assumptions and judgments, in order to uncover their roots, because these roots are behind everything we think and therefore everything we do.

These Days

whatever you have to say, leave
the roots on, let them
dangle
And the dirt
Just to make clear
where they come from

Charles Olson

We can accomplish this by slowing down our verbal interactions so that we have time to observe them as they are occurring. Slowing down also allows some extra space for new thoughts or thinking to penetrate our awareness. If, at the same time, we could "suspend" the thoughts in our databank, we might be better able to see alternative possibilities far more creative than the ones we presently adhere to. But since we cannot push the

delete key on our databank, what we can begin to do is learn how to "suspend" our thoughts, beliefs, and past assumptions. That is, put our thoughts on display for ourselves, and others, not insisting that we must be "right" in what we say (Teurfs and Gerard 1993, p.8).

It follows that if we learned how to listen to others' thoughts the same way, again "suspending" our evaluations as to the truth or falsity of others' ideas as they are normally quickly determined by our own databanks, we might become more open, coming closer to sharing the understanding of alternative perspectives. New understandings and new shared meaning at the group level might then evolve naturally (Teurfs and Gerard 1993).

Many people want to be involved in unfolding truly new and successful ways of sharing and creating with others. The Dialogue Process, through opening up communication and the possibility of creating new meanings, offers us a potent avenue, if we are willing to allow our own thought processes to become open to observation and change.

Can we learn how to suspend our judgments? Teurfs and Gerard say that such learning ultimately depends on each individual:

> In dialogue each person finds his/her own methods, comes up with different images that help to drop or release judgments. Whatever the technique, the first step is always becoming aware of the occurrence of judgment. We do this by listening attentively to our own responses; listening for our sudden disagreement, discomfort, or passionate approval. Disagreement and agreement are two sides of the same judgment coin. The goal is to suspend the thought that something is either right or wrong. By suspending our judgment, we open the door for new perception and meaning to show itself to us. (Teurfs and Gerard 1993, p. 9)

Listening

The role of listening within Dialogue might be initially described by the practice of learning to pay close attention (Teurfs and Gerard 1993). Listening is more than linguistic processing of auditory signals. Listening in Dialogue refers to all the senses, watching ways in which how we "listen" determines what we perceive.

We receive all kinds of information from our environment, and our "filters" (Teurfs and Gerard 1993, p. 10) for the immense amount of sensory data determine our interpretation of the data we acquire and thus, our relationship to the world. Dialogue provides an opportunity to go one step further, to listen to how we listen, particularly in reference to how our most unconscious assumptions affect our interpretations of events, people, ideas, and life in general.

Dialogue develops many new listening abilities: focusing attention, letting go of our preconceptions, listening from a mindful space, while simultaneously identifying our feelings and emotions in response to others, checking for accuracy, and questioning to explore what we think we heard. All of this ideally takes place in an open cultivation of allowing and accepting the ideas of each participant (Teurfs and Gerard 1993). This safe space functions identically to the **children's safety zone** , as previously discussed in Chapter Two, opening the gateways to new discoveries and new learning. Our personal beliefs and assumptions are also given direct attention, insofar as it is possible to let go of our filters enough to see how they might be functioning.

Dialogue works developmentally. The more we learn to listen with a new, more open perspective, the more we become able to create a space where

other people feel they are heard, accepted, and validated. The adult safety zone means others can then take expressive risks. More and more individuals can then step forward, displaying more of their own seldom shared thought and thinking. As a result, we all learn. Listening in these new ways has wide and deep implications for any learning or educational endeavor. Dialogue uses the adult safety zone as its foundation, thus Dialogue resonates with the recent research on the brain previously outlined, and also with suggestive learning theory.

Assumptions

As Teurfs and Gerard (1993) comment:

> Our assumptions play a large role in how we evaluate our environment, the decisions we make and how we behave. Yet, it is this obvious aspect of our thinking that we consistently overlook when we seek to solve problems, resolve conflicts, or create synergy among a diverse group of people. Why do we overlook the obvious? David Bohm would say because our 'assumptions are transparent to us'. They are such a built-in part of our seeing apparatus that we do not even know they are there. We look right through them. (pp. 11-12)

In Dialogue we practice looking for our assumptions. To learn to identify our assumptions requires the initial desire to see them. Then, over time with practice, we improve our ability to identify them and reveal them to others.

Teurfs and Gerard (1993) assert that there are no magic tricks to learning to suspend our assumptions. However, even identifying an assumption starts us on the road to "suspension" (p. 16), since recognition gives us a measure of distance from our thought, a way of using a zoom lens

to back away from identifying with them so closely. Just observing our assumptions loosens their hold on us as truths, helping us begin to listen to differing opinions without reacting. This often signals the beginning of new listening abilities, and new levels of individual and group creativity (Teurfs and Gerard 1993).

Reflection and Inquiry

Teurfs and Gerard (1993) describe the concept of reflection from a scientific perspective:

> In optics to reflect refers to the redirecting of light back in the direction from which it came. Reflection is the process through which an image is created in a mirror. One primary use of a mirror is to make objects visible to us. In the same way, when we reflect on a thought, it becomes more visible to us. This 'making visible' is an essential part of the learning process. (p. 17)

Therefore, an individual's ability to reflect connects directly to his/her newly developing abilities to inquire of others. When we ask genuine questions, that is, when we inquire without our own manipulation, position, or interest loading our words, questions can greatly enhance the opportunity for Dialogue participants to reflect on their own process, and to open their meanings to others. Thus, reflection and inquiry are advanced dialoguing abilities that tend to emerge slowly and go hand in hand. Genuine inquiry often promotes the alive thinking associated with Dialogue, often termed "the flow" (Bohm 1990, p. 1). Though "the flow" is at first generated as individuals acquire the new abilities of listening, suspending, reflecting, and inquiring, the uniqueness of "the flow" consists in its freedom, intelligence,

and creativity which follows no specific rules, but appears to emerge spontaneously from the field of intelligence available to the group once its normal thought boundaries have been dissolved.

As the practice of Dialogue, through the core skills Teurfs and Gerard (1993) have outlined, evolves into more and more natural ways of communicating and relating to one another, it makes possible a learning environment much deeper and more creative than anyone's previously built databank can offer. Dialogue becomes self-reinforcing; for those of us involved at length in this process, old ways of interacting and learning seem outmoded and terribly dull by comparison.

There seems to be little reason why the new critical and creative abilities used for Dialogue cannot be shared with children as well as practiced by adults. In fact, if our classroom interactions took place within a truly dialogic atmosphere, we might <u>all</u> look forward to the experience of revolutionary, exciting, and profound changes in our life-long learning.

CHAPTER V
THE HOLISTIC TEACHER

Across Curriculum Approach

Research on whole-brain learning offers new evidence that educators need to greatly alter their teaching strategies. In this chapter I will present thematic teaching as one across curriculum approach that can meet the new objectives of whole-brain learning. Healy (1990) states:

> During development, neurons in both hemispheres must compete for synaptic sites, so the type of input growing brains receive is undoubtedly important for its final hemispheric balance. Learning that builds both analytic and holistic abilities is doubtless good for the brain. (p. 127)

Real life skills have become the hub of my new class curriculum. What this suggests is that the more closely instruction is related to the actual living experiences of the child, the more likely it is to be effectively integrated by the whole brain. I consider real life skills to be the practical and concrete social skills that will encourage the development of the whole child. I provide opportunities for students to acquire and practice social skills in specific areas.

One requisite for the development of social perspective is the ability to predict others' feelings. For children to evaluate possible actions they could take in a social situation, it is important for them to be able to predict how others might feel as a result of their action. In my present classroom, I provide children with opportunities to learn that what a person does and says affects how other people feel, and that one can often predict how others might

feel in certain situations. For example, a lesson about predicting feelings can develop empathy, and I create a link from a language concept to a social skill. I present all social skills lessons in the **children's safety zone**. This is both a physical area in my room as well as a secure emotional space, a carpeted area in the center of the room, containing stuffed animals and pillows. We refer to time spent in this area as "circle time" because we sit on the floor in a circle.

For instance, the lesson format was a story and group discussion, when I began by telling students that they would learn to figure out how someone might feel if something happened to them. The language concept of an "if - then" sentence was combined with "predict." I suggested that when we make plans or decisions which would affect another person, we need to consider how that particular person might feel about our ideas, i.e. to predict their feelings.

I presented a picture: a girl and boy, named Maria and Toni, talking to each other. I explained that Maria's cousin Toni had just come to visit for a week. Toni lived on a farm and didn't get to play with other kids much. He was very shy. Maria was telling Toni that she wanted to invite a bunch of her friends over to introduce them to him. I asked: <u>if</u> Maria had a bunch of friends come over, <u>then</u> how might Toni feel, and why might Toni feel this way? (Children responded: shy, nervous, uncomfortable, embarrassed because he is not used to being around other kids; he might not know how to act or what to say.) The next step was to suggest that <u>if</u> Maria invited just one friend over, <u>then</u> how might Toni feel? (Children responded: somewhat comfortable; he might still feel shy.) I pursued the question: what else can

things together so he won't feel so self-conscious.) Then I altered the scene if Toni were not shy, but very outgoing, then how might he feel if Maria invited a bunch of her friends over to meet him? (Children responded: excited, pleased.) A closing discussion might center around responses to further more personalized questions: Have you ever been in a similar situation to Maria or Toni? How did you feel, and what did you do?

Children need many examples in order to grasp a broader concept. I follow up this discussion by using the term "predict" in the classroom when opportunities arise, and I encourage students to use the term "predict" during math lessons, science experiments, as well as in predicting the effects that changes in the endings of short stories they are reading might have on the characters in that story.

Other educators like Rudolf Steiner present perspectives that also meet the requisites for whole-brain learning while simultaneously creating the necessary psychological atmosphere of safety. According to Steiner, as quoted by Wade Holland (1983), our highest endeavor must be to develop free human beings who are able of themselves to impart purpose and direction to their lives. Holland emphasizes that HOW learning material is presented to children should be our focus rather than a WHAT is presented as content:

> The uniqueness of the curriculum lies in how the children are taught. In presenting material, first comes the encounter; then encounter becomes experience; and out of experience crystallizes the concept. Perception, feeling, idea: three steps in a genuine learning process, one that is in harmony with the child's nature and which meets the child's needs. (p. 1)

likely to engage the brain. When real life situations are encountered in such a way as to open doors for each child's brain to encounter, experience, and conceptualize what is meaningful to that child, the natural learning process can be evoked.

The communication of feelings is another real life skill that I attempt to develop in my classroom. I present the concept that "I" messages can be effective statements for communicating feelings. Students are encouraged to give "I" messages when communicating their feelings to others. Stressing the use of the words "I feel...when", I provide many practice opportunities so that children may discover for themselves that letting people know how they feel helps in solving problems. "I" messages contrast with the many less constructive ways children often use to communicate: "you" messages, pouting, or acts of physical and/or verbal aggression. In addition, I use role-play games with students in pairs in order to practice role-playing situations using "I" messages to express their feelings. Examples of such student role-plays include typical experiences: someone cuts in line in front of you; you find out a friend is talking about you behind your back; you lend your felt pens to a friend and the friend gives them back dry; you wait to use the school computer and another student doesn't let you have a turn. Along with practice in role-plays, I guide students to substitute "I" messages for "you" messages during everyday conversation and personal disagreements.

Swartz' report for the Massachusetts Educational Assessment Program (1989) relates good thinking to the important process of reading:

> As any good reader is aware, reading is not just the passive absorption of what is on the printed page. It is an active process whereby we create, extend, and reflectively assimilate meaning from what we read by selectively bringing to bear things that we already know and blending them with what we get from the text. (p. 1)

Thinking

Since children will only utilize thinking processes that their own brains can encounter usefully, our adult abstractions (what we "choose" for them to learn) may easily be lost as irrelevant to children's own everyday living. Instructional strategies to promote and develop the use of good critical and creative thinking are most effective when they involve students in forms of thinking that they can use again and again in their daily lives.

In developing social skills with students, I also introduce the concept that people may have conflicting feelings. That is, people have different or opposite feelings about the same situation, or that people's feelings may change, and that their own feelings may differ from other people's. How to identify a person's feeling or emotion, by looking for clues in that person's face and body and in what is happening, is also practiced. This development of social skills for real-life situations is integrated across the entire curriculum as I engage children in further thinking beyond the abstracted content, of any particular subject area, by bringing ideas into their own life experience.

According to Robert Swartz (1989), there are three basic goal-oriented thinking categories: thinking directed towards generating ideas, thinking directed at clarifying ideas, and thinking directed at assessing the reasonableness of ideas (whether they are worthy of our belief, however clear they may or may not be) :

Teachers need to address the following questions: 1) How does a teacher generate ideas from students? 2) How does a teacher help to clarify ideas from students? 3) How does a teacher help students to assess the reasonableness of their ideas?

In actual life situations we are all asked questions like: What do you think? How did you think of that? Who do you think you are? Why are you thinking that way? Can you think of an idea? It follows that in the classroom situation, teachers can also question students about their thinking.

What is thinking? Are we thinking all the time? Are we aware of our thinking? Is good thinking involved in everything we do? Thinking in ways that raise our awareness of thought itself needs to be nurtured and developed in school as a real life skill.

One way that I promote penetrating thinking in my own classroom is to develop open-ended questions and activities, together with students. I also allow "wait time" when asking students to think and answer. I organize students into cooperative groups for probing, discussing, interpreting, and thinking out loud. I assign special projects, such as conducting an interview, writing a newsletter containing a variety of writing styles, e.g. news articles, editorials, advertisements and short stories. In this way thinking can be productively engaged while other skills are also advanced.

A comprehensive picture of what good thinking is about needs to emerge for every learner. How can this goal be achieved? For me, my critical and creative thinking framework serves to unify my instruction across curriculum areas. One example of this is the new way I introduce students to interpersonal problem solving strategies. My goal is to decrease impulsive and aggressive behavior in my students by having them learn and practice successful social skills. Problems, then, are defined as difficult or troublesome situations which may be solved by applying a strategy. I note the parallel to reading strategies, such as decoding skills or context clues, which they already know how to use to increase their understanding of a word, sentence, or a

paragraph. Or, I point out that the math strategies they have acquired in the four basic operations of math allow them to solve math problems.

Moving on, I then discuss social skills as strategies for behaving with other people. I have asked students to name some types of interpersonal problems that children their age might have with other children. Typical responses have included fighting, name-calling, gossiping, being left out, pushing, jealousy, and anger. The children could also identify interpersonal problems with their family members such as doing chores, homework, and getting along with their sisters and brothers. Discussion then centered around our classroom rules for acceptable behavior. Each child also shared their family rules as the basis for group social behavior. In this way I can make connections in all directions, emphasizing that we all have many social skills for dealing with other people and situations, and the more attention we pay to improving these skills, the better we will get along with others in the world.

In addition, thematic teaching allows the possibility of my drawing connections between specific academic skills and specific thinking skills. An element involved in thematic teaching is to step outside of the context of the passage itself, to analyze its intent, to judge and evaluate its content. For example, in Tuck Everlasting by Natalie Babbitt, the main character, Winnie, is kidnapped when she discovers a spring of eternal life that the Tuck family has long kept secret. Pa Tuck tries to explain the "wheel of life" and the consequences of not ever changing to Winnie. In order to step outside of the context and analyze the intent of this excerpt, I shifted students' attention to their science curriculum. I asked students to demonstrate their understanding of Pa Tuck's wheel analogy, by completing a water wheel as an illustration of evaporation and condensation. Then, I used the water wheel

to have students put into their own words what they thought Tuck meant when he suggested that people's lives are on a wheel. How and where did the Tuck family "drop off?" Thus I connected art, science, and interpretive skills across curriculum to enrich my students' understanding of the story's implications.

Further, I encourage students to develop and use their critical comprehension skills through demonstrating ways to use evidence to judge and evaluate the material they read. For instance, during a nutrition unit in health, students were asked to bring in newspaper and magazine food advertisements. The children examined the ads in order to determine the nutritional value of the products, as well as to analyze the ideas presented in the ads. In reading, I instructed students so that they selected reading strategies and techniques for checking their understanding of concepts as they were reading. They were asked to compare and contrast several ads about food in an attempt to figure out more exactly the intention of the ad. The same activity was also used for recognizing certain cues while reading the material in the ad. The class became so involved in this task that they decided to write ads of their own to mail to the various food companies to serve as examples of more honest advertising.

Learning cannot become a life-long process for students unless educators take up the challenge of stimulating students to become active participants in their own education. Reading skills are only one means of empowering students in the category of clarifying ideas. While a student is reading a story, an article, or a passage, the student is actively occupied, thinking many things simultaneously. The type of thinking that is engaged can be quite varied. It might be critical or creative thinking. It might also be reflective or interpretive thought. As students go about learning specific

skills for reading and language development, they can also consciously learn specific skills for good, skillful thinking.

The outline below suggests a general reading curriculum which can simultaneously pursue both the objectives of reading skills and thought development:

Reading Skills

I. Decoding skills
   1. Long words
   2. Inflection (f to ve before s)
   3. Vowel digraphs ou (gh) (o,u,uf,af) au (gh) (af)
   4. Suffixes (ment, ness,er)

II. Vocabulary skills
   1. Word identification in context
   2. Word identification
   3. Vocabulary development (synonyms/antonyms)

III. Comprehension skills
   1. Recognizing figurative language
   2. Predicting outcomes
   3. Author's purpose
   4. Sequence
   5. Comparison
   6. Referents

Skills in Higher-Order Forms of Thinking

I. Skills at generating ideas
   1. Alternative Possibilities
      A. Multiplicity of ideas
      B. Varied ideas
      C. New ideas
      D. Detailed ideas

II. Skills at clarifying ideas
   1. Analyzing ideas
      A. Comparing/contrasting
      B. Classification/definition

2. Analyzing arguments
   A. Finding conclusions/reasons
   B. Uncovering assumptions

III. Skills at assessing the reasonableness of ideas
1. Support of basic information
   A. Accurate observation
   B. Reliable/unreliable secondary sources
2. Inference
   A. Use of evidence
      1. Causal explanation
      2. Prediction
      3. Generalization
      4. Reasoning by analogy
   B. Deduction
      1. Conditional arguments (If...then)
      2. Categorical arguments (All /some)

Since many of the skills within the outline can be taught together, they can be offered for differing grade levels. In Grade 1 the reading program focuses upon decoding skills, phonics rules and simple sentence structure. In Grade 2 the reading program broadens to literal and interpretive comprehension skills as well as more decoding and phonics skills, and the increase in vocabulary development. While I was teaching "Chapter I students" of Grades 1 - 5, I developed teaching strategies geared toward individual aptitudes. As curriculum content for reading develops through elementary years, students need to be taught important thinking skills. Now in Grade 5, I help students to draw their own connections in all content areas to specific thinking skills, and I focus curriculum content to their total school experience emphasizing real life situations, so that I can count on students' own brains to make their own neuronal bridges to organize and relate their perceptions in meaningful ways.

To this end, both the discovery process and the problem-solving method of teaching provide two new and exciting teaching approaches. Skills

in higher-order forms of thinking can be infused in the areas of language, reading and right brain comprehension. For generating ideas, teachers can encourage activities that allow students to explore other possible outcomes, as in "what if" writing lessons. Here, students themselves become the main character of the story and create new ideas which might change the story outcome.

We read Abel's Island, for example, after a unit in our literary reader entitled "Understanding Self and Others." Abel's Island by William Steig, whisks the reader off to a place where a pampered mouse named Abel (used to a life of ease) is forced to see himself clearly for the first time. Throughout the novel, Abel is forced to ask the question, "Who am I?". While reading this, I challenge the class to confront personally their own question of "Who am I?" by writing a daily diary as if they were the character stranded on the island trying to survive. I ask the children to create outcomes for themselves that are different from Abel's dilemmas.

In another activity "You Be The Author," students are asked to re-examine a story from their own point of view, and then to write a new series of events or predicaments for the main character to solve within the framework of the original story. For example, students might focus on a weakness of the main character, creating situations that might strengthen that weakness. In addition, a student's actual life situation that in some manner might parallel the story content can also be examined. This offers ways to generate ideas for solving problems of their own; e.g. how the main character solved or failed to solve her problem can be brought to bear on how the

skills of comparing and contrasting ideas need to be developed in order for students to delve more and more deeply into weighing and assessing similarities and differences. One such activity is to focus on one author, having students read many of his/her selections. I do this as I expand the social studies curriculum, by delving into literature which concerns itself with Native American Indians. I put special focus on the books about the Plains Indians by Paul Goble. Students compare and contrast characters, main ideas, plots, and outcomes across Goble's stories. I encourage comparison of one author's ideas with another's, stressing similarities and differences by having students examine the work of Tomie dePaola in comparison to the work of Paul Goble. Two pieces of literature that I particularly like for comparison are Her Seven Brothers by Paul Goble and The Legend of the Indian Paintbrush by Tomie dePaola. While the stories are rich in terms of comparative potential, each piece promotes distinctive artistic and historical contributions made by Native American Indians, allowing us to travel several learning avenues at once.

Analyzing ideas also involves the areas of classifying and defining. I challenge students to classify characters from a group of favorite stories according to role or personality. For example, fairy tales are an excellent source for analyzing character roles or personalities. I have students bring copies of their favorite fairy tales. Children's excitement is contagious as they share their bedtime stories in circle. I have each child read his/her favorite fairy tale to their first grade "Reading Buddy." Later, students are asked to describe the story's characters according to personality. For instance, Cinderella, Snow White, Rapunzel, and Gretel are often classified by the students as girls who are easy to get along with, kind, pleasant, and loving. The seven dwarfs, Hansel, and Jack, from Jack and the Beanstalk, are usually

classified as rugged, determined, and brave. In addition, throughout the year, students keep a log in their journals containing comments on the characters we meet during reading. The writing focuses on those character traits each student sees as valuable for him/herself. We reflect in circle on the application and practice of these attributes. Participants come up with concrete suggestions describing times and places for developing desirable traits for themselves. I also use type of story, type of outcome, or philosophical perspective as further comparison activities.

Also, in order to analyze ideas, students need to learn how to define them and then to give examples of an idea. One way we practice this kind of analysis is through the theme of perseverance, one which I explore throughout the school year. I guide students toward understanding first, its definition; that perseverance is the quality of sticking to a course of action, a belief, or a purpose without giving up. Then I have students describe famous people, both living and dead, who have shown perseverance in their lives, generating a list from which the children, working in pairs, can then select one person to learn more about. They then write about what he or she did to persevere in a course of action, a belief, or a purpose. Students can attach a photograph or picture of the person to their writing piece, to be displayed on a special "Perseverance" bulletin board. This activity is continued every month of the year, gradually incorporating people discussed in our literary reader as well as in social studies, the arts, the sciences, and music. I also encourage students to consider <u>themselves</u> as possible subjects for our perseverance bulletin board. Again, the activity "Who am I?" in writing allows opportunities for sharing self-growth in this personal way.

Further, in reading, analyzing ideas can involve discovering the author's purpose. We begin by uncovering the main idea of a story, and then

we seek to define it in our own words, and finally, to find examples throughout the story that support our own idea about the main idea and author's purpose. This series of steps becomes a process that furthers analytical abilities while at the same time deepening the students' comprehensive grasp of the story and its implications.

Clarifying ideas involves the ability to analyze arguments. Some higher-order thinking skills used to analyze arguments include identifying conclusions and reasons, and uncovering assumptions. In reading comprehension, students study sequence through identifying the various steps in a process before trying to find the series of actions that led to a particular result, and further, to figure out what comes next in a sequence. Such steps also challenge the student to discover conclusions/reasons associated with character actions, and can be used to help students to uncover their own daily assumptions. For example, students are asked to list the sequence of actions they go through in getting from bed to school in the morning. A list of the reasons they might be late or on time could be utilized to uncover assumptions they have made: e.g. the bus is "always" on time; therefore, either I have get out of bed now, or, if I stay in bed, rush later by skipping breakfast.

For skills in assessing the reasonableness of ideas, reading activities provide opportunities to identify those characters who make accurate observations and those who do not. Moving further, I ask students to reflect upon how and when in the student's own life similar situations may have occurred. Comparison of "reliable" sources of information seen in the story and examples of "reliable" sources of assessment from their own lives invite students to enhance their thinking and reading skills. Inferential abilities can

be developed through reading activities by finding and using evidence from a story that might be used in favor of or against the author's main idea.

Prediction is another critical skill that can be practiced in reading, either at the beginning or end of a story. For example, I introduced one story by posing a question to the class:

> The novel we will be reading is "Bridge to Terabithia" in which the two main characters are a fourth grade girl and boy. Can you make some predictions about the content of the story?

I revealed some facts in the story to the class before they recorded their predictions, for example, the story's setting: It was late summer, anticipating a new school year; it took place in a rural area; the girl was new to the area; the boy was a native; and so forth. Further hints included that both characters liked athletic challenges, that the girl was an only child while the boy was the eldest of four siblings, and that the opening chapter described a one mile race to determine who was the fastest runner in fourth grade. The students' predictions of what they thought would happen within this backdrop were shared and discussed before reading, and also as the novel progressed, chapter by chapter. As evidence was accumulated supporting or disputing their predictions, students found their ideas altering.

Generalization and reasoning by analogy, as well as examination of alternative possibilities, debating, and propaganda techniques, are inference skills that are readily applicable to reading comprehension. Deductive reasoning, using conditional and categorical arguments, comes into play both when assessing the reasonableness of ideas and when clarifying ideas. As the above examples from story reading indicate, my teaching strategies have

broadened and deepened because of my own development in critical and creative thinking, now central elements in my classroom.

The across curriculum approach to teaching, based upon the discovery process and the problem-solving method of teaching enhances the possibility for students to do connection-making in all subject areas. The year long theme in my classroom this year is diversity. Social studies content focuses on multicultural awareness, beginning with immigration and its effect on the development of this country. I link historical content to our actual classroom diversity of learners. Also, year long investigation of cultures around the world, studying and appreciating their customs, foods, dress and contributions to humankind further deepens the diversity theme, while simultaneously stimulating pride in students' own multicultural backgrounds and respect for the backgrounds of others.

I have linked geography in my class rather unpredictably to the math curriculum. Fractions, ratios, graphing and calculating have been developed together with the skills of reading and understanding maps and globes. We use the four basic operations of math when analyzing populations around the world, land mass and ocean depths. Thus, understanding of diversity in the whole planet is broadened, while one subject area becomes linked to another.

This year, opportunities for making further connections appeared when I supervised two student teachers during the fall, whose practicums overlapped. I suggested that the second student teacher, R. J., should piggyback her unit to that of the first student teacher. K. L.'s unit sprang from the social studies curriculum; while we studied cultures around the world, her unit focused on travel. R. J., entering eight weeks later, delved her unit into transportation around the world, specifically shipping. As the fall curriculum unfolded, each of these units enhanced one another. The

richness of having three different adults and three related perspectives interacting with the children and their perspectives created a powerful environment for learning through connections.

I envision education in an open, circular space, with freedom and movement allowed. Within this space, self-awareness can flourish. Reading and writing, which are such subjective processes, can safely develop in such an environment. Each process occurs, with the students facing their own reader/writer within themselves. Then, when reading and writing are passed to another, it is recognized that what is written is received with <u>that</u> reader's bias. The Brazilian educator Paulo Freire (1970) concludes:

> Students, as they are increasingly posed with problems relating to themselves in the world and with the world, will feel increasingly challenged and obliged to respond to that challenge. Because they apprehend the challenge as interrelated to other problems within a total context, not as a theoretical question, the resulting comprehension tends to be increasingly critical and thus constantly less alienated. Their response to the challenge evokes new challenges, followed by new understandings; and gradually the students come to regard themselves as committed. (p. 62)

If we can create a type of group dynamic in classrooms where both students and teacher shift from "knower" to "learner" modes in authentic reflection, greater objectivity could arise for the learner. In this case, <u>each</u> learner is valued, for TEACH contains the word "each." Learning has to be done individually (like eating) but it can expand when it is done together. Circle learning within the children's safety zone encourages sharing, respect, and cooperation from each participant. As Freire (1970) concludes:

Education as the practice of freedom -- as opposed to education as the practice of domination -- denies that man is abstract, isolated, independent, and unattached to the world; it also denies that the world exists as a reality apart from people. Authentic reflection considers neither abstract man nor the world without people, but people in their relations with the world. In these relations consciousness and world are simultaneous: consciousness neither precedes the world nor follows it. (Freire 1970 p. 62)

CHAPTER VI
A COMMUNITY OF LEARNERS

Organizational Leadership

I have proposed a decentralized teaching style as a means of creating a psychologically safe learning environment, and an across the curriculum approach to classroom learning, in which arts-based, thematic units serve as guides to the world of process. I have suggested that teachers teach concepts, rather than elaborate rules, structures, and isolated facts. I have described the Dialogue Process as a tool to expand learning within the environment of the other methodologies outlined.

I have illustrated strategies for classroom management, the micro-level, which can be introduced across the curriculum. These ideas, however, have implications wider than my own classroom. Seen from a larger perspective, the macro-level, we need change to move beyond my room organically, as it did in the changes in Resource Room operation, and further, as a perspective for learning at the school and community levels. What I am envisioning for schools is a holistic approach across grade levels, which can be designed as part of a plan for school-based management. Windows on Teaching (McDonough 1993), a strategy unfolding among faculty members in my building, opens the way for teachers to share concepts across grade levels. In our case the interrelatedness of the world of processes is our underlying theme. Schedule blocks provide opportunities for the learners now placed in varying grades to interact, to discover the connection between their own curriculum content and the world of processes. Participating faculty members meet twice a month to review current units being taught. Partnerships are

formed between classrooms of different grade levels in order to design links for interacting. For example, my fifth graders are "Reading Buddies" with a first grade group. We meet every Monday in the Media Center for thirty minutes to share books and pieces of personal writing. Our meeting begins in a tribal council with the fifth graders in the outer circle, with their first grade buddies sitting inside the circle, facing them. Time is provided to talk, then each pair finds a quiet spot to sit together and read.

I also envision the Dialogue Process, as I have experienced it, as an integral component for increasing understanding in schools. In order to empower a student in the classroom, the teacher needs to open the learner to her human endowments: self-awareness, consciousness, imagination, and independent will. A classroom practice like tribal council allows just such an opportunity for empowerment of students. Studying thematically the life and practices of Native Americans as described in Chapter Five is used as a framework for introducing the Dialogue Process into the classroom setting. During tribal council each week, the children have begun to notice their listening. The diagram of a pizza, that I have created with different feelings identified on each slice of pizza, and referred to as our feelings pizza, has helped the children identify varying emotions as they notice their feelings. The shared space created during tribal council has been an experience for the children, one that has enriched our learning.

Similarly, in order to empower teachers in school-based management, the faculty can be greatly supported by introducing the Dialogue Process, an opportunity to gather together to think, reflect, and share meaning, that is, to learn together about the task of educating the young.

implementation" (p. 66). Just as students need a voice in their learning process, the faculty members of a school need a voice in the creation and design process for their own school-based management.

Research clearly suggests that teachers' roles are changing, placing increasing demands on them to meet the psychological growth needs of children (Healy 1990). The need to establish safe, secure learning environments for children in schools goes beyond the hours spent in the classroom. Some schools serve children from breakfast time (7:30 a.m.) until dinnertime (5:00 p.m.), and on certain days into early evening (6:00 p.m.). Fortunately, in Massachusetts school-based management has begun to take hold in administration, the level of power where change can become a reality. Ideally, a Dialogue Process might have taken place, one including the governor, the legislators, educators, parents, and perhaps even children, prior to having written the Massachusetts Education Reform package. If everyone's ideas had been shared, if everyone had practiced listening and suspension of assumptions, the "re-forming" process might have gone much deeper, and been more inclusive.

Wheatley (1992) describes "autopoietic structures"(p. 18) as forms in which each structure contains "a unique identity, a clear boundary, yet it is merged with its environment" (p. 18). Education, from preschool head start programs to undergraduate, graduate and doctoral programs might ideally be an autopoietic structure. Wheatley also speaks about the dissipative structures in chemistry. These structures teach a paradoxical truth, that disorder can be the source of the new order.

> Dissipation doesn't lead to the demise of a system. It was part of the process by which the system let go of its present form so that it could re-emerge in a form better suited to the present environment. (p. 19)

To use phrases from Wheatley's work that may well apply to our current educational crisis, society as one environment has provoked the educational system into a response. If this internal social disturbance is listened to, the process of disintegration of the educational system can become something quite wonderful, that is, reconfiguration at a higher level of complexity, one better able to deal with a new environment. According to Wheatley, however, this process will only work "if the system pays attention to this fluctuation, the information grows in strength as it interacts with the system and is fed back on itself (a process of autocatalysis) " (p. 19).

Let me personalize this issue by discussing my own autocatalysis and dissipation. The descriptive signals are heard by me as I struggle to understand the roles I play in my own life: I am a woman, a single-parent of two college-aged children. I notice first, that I begin to define myself by the terms woman and mother. I am also a teacher and now a student, one who finds myself learning as I teach, and teaching as I learn. I am dedicated to self-growth as part and parcel of facilitating the growth of both my own children and my students.

I find myself being pulled dissipatively in opposite directions. While I creatively figure out ways to afford college tuitions for my two children and myself, attempt to meet the needs of the twenty-four students in my classroom, and simultaneously create proposals for school-based management, critical and creative thinking skills, and the Dialogue Process, I discover that my life has evolved into a learning process that is now focusing on integrating and balancing new elements. Supported externally by the learning process involved in my graduate studies, my own growth now moves into those around me, with decreases in isolation felt by us all. In this

way, my own life illustrates the possibilities Wheatley (1992) has outlined for "systems change" (p. 21).

Changing Consciousness

A school, in its educational work, is a joint undertaking. School-based management has positive potentials that include all participants: students, teachers, parents, administrators, counselors, nurses, secretaries, custodians and lunch staff. In Consciousness Education -- Minddoor to the Twenty-First Century ,Thomas Roberts (1981) asks:

> Have we developed reliable access to the states of consciousness where abilities reside? Consciousness Education is an exciting adventure in human development...an exciting search for unused human potentials. (p. 120)

The evolution of humankind has brought about an evolution of education. Already decades ago, John Dewey in The School and Society (1956), wrote:

> ...[O]ld education: its passivity of attitude, its mechanical massing of children, its uniformity of curriculum and method may be summed up as saying that the center of gravity is outside the child. It is in the teacher, the textbook, anywhere and everywhere you please except in the immediate instincts and activities of the child himself. (p. 34)

Dewey spoke of a change coming into education back in the early part of this century, likening the change to a shift in the center of gravity that came with the Copernican revolution:

> ...[W]hen the astronomical center shifted from the earth to the sun...the child becomes the sun about which the appliances of education revolve; he is the center about which they are organized. (p. 34)

Technological advances, especially television, during the second half of this century have shunted children's attention away from the development of language and communication using language. It is for this reason that I believe the Dialogue Process is essential, in order to re-address and raise thought and communication into their true importance and relevance in our lives.

The Tool for Restructuring

"Dialogue in Educational Settings" by Dhority (1994) makes the necessary connections for understanding. He refers to Martin Buber's work as the "heart" of dialogue and David Bohm's (1990) work as the "mind" of dialogue. Dhority says:

> When the heart and mind come together a potent dialogue becomes possible which enables us to <u>be</u> deeply connected to each other and to <u>inquire</u> collectively in penetrating and creative ways. (p. 1)

My involvement in the Dialogue Process has transformed me, in the classroom as well as at home. I notice my listening and my speaking now, in ways I would never have dreamed possible. I am much more observant about my own assumptions and much more interested in those of others. I am growing and changing, that is, *learning*, every day. I have a parallel

vision for school-based management through the Dialogue Process, one which could be generative, alive, and creative: a process of thinking collectively about what we are creating, while reflecting at the same time about the implications of our assumptions. I imagine that such a dialogue can bring an end to separation and isolation in education as a whole, and in schools as a whole. As Dhority (1994) states:

> Dialogue's potential as a tool for personal and social change is vast, because it has the capacity to reveal the substrata of human thought, that is, the stuff out of which we create our cultures, societies, families, and individual lives. I am not talking about an exercise for intellectuals. I am talking about a collective, compassionate sharing and understanding of the feelings, attitudes, opinions, beliefs, assumptions -- that is, the creations of our minds, which we may term THOUGHT. (p. 5)

I conclude with an image of my school being like the United States of America. Each state is represented by each classroom in the school. Each has special attractions and interests. The collective bond of each state to the entire government as one nation, can be experienced in schools. Ferguson (1980) creates this picture which I will offer as food for thought:

> The United States -- a Nation of Nations, so shaped by the visions of its immigrants that it is international.
> Imagi - NATION...it is fantasy that leads to reality, not the other way around. What we envision we can make real. (p. 134)

Concluding Remarks

The rows of isolated classrooms along corridors in urban school buildings mirror the rows of houses in our inner city neighborhoods. Communication among these isolated groupings continues to decrease, threatening a deafening silence. How can we create understanding and shared meaning among isolated parents, administrators, classroom teachers, and students in their learning? How can these parents, administrators, and teachers empower students in their learning if they are not empowered themselves? How can we dissolve these walls of isolation to create the true classroom? The true classroom is an environment which creates joy in the process of life-long learning. It is this classroom that will break the isolation, rather than ending up with our walls down, a free-for-all in the gymnasium, or spoon-fed learners.

The question of what is learning all about is an enormous one. Because this question has exploded my personal learning potential, because the changes incurred in me have dramatically and positively affected my classroom teaching, and because the ripples of these changes are now affecting the classrooms, teachers and administrators around me, I have chosen to explore and explicate my own recent learnings in view of their implications. I believe that my own process speaks not only to my students but to all students of life-long learning, and thus, all educators and administrators as well.

Importantly, isolation is as common within a classroom as without, thus environment within a classroom, both physical and psychological, is a crucial factor to consider when examining student learning experiences. Likewise, the atmosphere in the school building affecting individual teachers

and the faculty as a whole is often another isolating element. On the other hand, where there is a climate of cooperation and openness for students and among staff members, positive attitudes toward all educational endeavors are awakened.

Further, if it becomes possible for teaching practices and the learning styles of teachers to become more one of mentor/facilitator, opportunities naturally expand for students' individual learning styles to unfold, develop, and emerge, in an optimal atmosphere for learning. To find out how to create this kind of atmosphere of learning as a joyful adventure, we need to study what actually goes on inside schools as well as what comes out of schools, (e.g. test results, employability and the commitment of the young adults within the community). Instead, we tend to focus on the stagnation and apathy common in society at large, which is too often reflected in our schools. Thus, educators have become burdened with the mandate to cure the ailments of society's young. By themselves, teachers and administrators cannot cure our future culture of its problems. They can, however, concentrate their energies on creating the best possible atmosphere for learning in their own classrooms and schools. To that end, as a classroom teacher I have pursued and have outlined here my own recent learning adventures and resultant integrated, holistic philosophy of learning.

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