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Personal Evolution: Reflections on a Journey to Self-Understanding

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PERSONAL EVOLUTION:
REFLECTIONS ON A JOURNEY TO SELF-UNDERSTANDING

A Synthesis Project Presented

by

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ABSTRACT

PERSONAL EVOLUTION:
REFLECTIONS ON A JOURNEY TO SELF-UNDERSTANDING

May 2005

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This synthesis is a reflective narrative scaffolded by three years of living and learning in a culture of thinking. I designed it to function as a record of my personal thinking evolution that I can refer back when I need inspiration months or years from now, as it defines where I was when I arrived, includes salient highlights from my three years in the program and ends with future directions. I came to CCT as a discouraged teacher confused about my future in education and frustrated with the rigorous demands of preparing students for high stakes testing. Learning to employ reflective thinking tools like freewriting and mind mapping led to significant personal discoveries, through which I came to a deep level of self-understanding. While I tried to avoid the difficult emotions that accompanied teaching in a poverty stricken urban school district, they covertly influenced my thinking, leading me to question who I was and whether teaching was the right career choice for me. Unpacking my emotional history was an exercise in self-definition. I am an educator at heart and the learning I did and support I received from peers in the CCT program enables me to go forward to find my niche teaching others.

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CHAPTER 1

INTRODUCTION: EVOLUTION FROM FRUSTRATED TEACHER TO REFLECTIVE PRACTITIONER

As a child, when someone asked me "what do you want to be when you grow up?" I would answer with the most esteemed career I could think of: a doctor. My choice was not based on a love of science or medicine. It was important to me to reach as high as possible, and doctor was as high as you could get according to my youthful calculations. In a college biology class my freshman spring, I earned my first failing grade ever. Over the next few months I spent many late nights in the library studying until the words in my notebooks blurred together. My work led to a passing grade and a significant personal discovery. I didn't want to make science my life's work! My sense of self evaporated that semester and I began to feel lost, confused and apprehensive about the future. I hadn't given much thought to what I would do if I didn't go to medical school. Looking back I can see that I didn't think seriously about that either. Since then I've tried on different hats including teacher, waitress, childcare professional, Emergency Medical Technician, facilitator and paralegal, searching for the right fit. No one field felt like the right path. I find the excitement of learning a new craft irresistible and hesitated to commit to one career for fear of becoming stagnant. My theory was that eventually when I found the right place, I'd stop worrying about being stuck and settle in, but

several years of experimenting hasn't alleviated my agony over the seemingly innocuous question, "What do you want to be when you grow up?"

The Critical and Creative Thinking (CCT) program appealed to me because I've been fascinated by creativity since I was young. Through participation in several problem-solving groups, I developed idea generation skills, out of the box thinking strategies and a deep respect for those who dare to do things differently. I learned to question the world around me and that answers can come from unlikely sources. As a teacher, I worked to implement lessons that would provide my students with the opportunity to foster their own creativity. I intended to appeal to as many intelligences as possible, to individualize instruction for each student, in order to fully access their potential. This was more challenging than I expected given my lack of experience, the reality of time constraints, a strict standardized testing regimen and wide range of ability levels exhibited by my students. As each year progressed I experienced a raging inner struggle over doing the job I was hired to do (ensure each student passed the End of Grade exam) and staying true to my beliefs (while standardized tests can provide valuable information about a student, they by no means give a complete picture of the learner and using them as the sole means of determining promotion limits the potential of our students and our educational system). I couldn't find enough time in one school year to bring students up to grade level, teach new information and meet individual needs for twenty-eight learners. I didn't know exactly what was wrong or how to go about changing it, but I wasn't the teacher I wanted to be.

I knew isolated lessons weren't enough to teach creativity, improve problem solving skills and encourage innovative thinking, but I couldn't figure out how to weave

it all together. Through CCT, I intended to learn how to reconcile this problem. I would learn how to infuse critical and creative thinking into my lessons while meeting state standards. I would figure out how to cultivate inquisitive thinkers who would question information before accepting it as truth, and these students would excel on their exams. I would instill passion for knowledge in my students. I had teachers who managed this amalgamation so I knew it was possible, I just didn't know how. I hoped CCT held the answer because "teacher" was what I wanted to be when I grew up.

To create the magnum opus that would complete my journey through the program, I searched endlessly through past work, CCT resources and conversations with peers and advisors for the big idea that I would build my project around. My original intention, applying CCT to teaching, didn't seem to be the focus of my work in the program. In fact, I wasn't sure I even wanted to teach, but I hadn't had a cataclysmic moment that clearly laid a different path for my future out for me either. I couldn't visualize myself in any career in particular, nor did I have a decisive next step for my life. As I reflected, freewrote, mind-mapped and brainstormed I made some important self-discoveries that led to research on emotional intelligence. In a moment that I describe fully in Chapter Three, I learned that unexpressed emotions adversely affect the clarity of my thinking. After writing a nearly complete draft of my paper largely based on emotional intelligence theory, I still didn't feel satisfied. Something was missing. And then one night, I felt the click. In a moment that can aptly be termed "a synthesis", I could see the big picture, how my thinking had evolved as I grew from the frustrated teacher I was in 2002 to the reflective practitioner I am today.

Throughout my CCT experience I engaged in self-study, the depth of which was possible because of the nature of the program. I learned the language of thinking together with theories, strategies, practices, examples and tools with a community of open-minded peers. Each of us had a unique experience, learning about our own thinking through self-reflection and about the thinking of others by example. Through immersion, I learned the processes of problem based learning, invention, research and engagement and creativity. In other courses I studied critical thinking, cognitive psychology, philosophy, collaboration and organizational change, action research and facilitation. Each learning experience scaffolded the next, and the evolution of my thinking, I've come to understand, is never-ending.

This synthesis is a reflective narrative scaffolded by three years of living and learning in a culture of thinking. An important element of the CCT program is reflection. Reading over journals from past courses, I can see how my thinking evolved over the course of the semester and how it's changed since or how it's stayed the same. CCT teaches that we have the capacity to contemplate our thinking processes and patterns to evaluate their efficiency, and the ability to consciously improve them. Change takes place over time. I designed this final narrative to function as a record of my CCT journey that I can refer back when I need inspiration months or years from now, as it defines where I was when I arrived, includes salient highlights from my three years in the program and ends with future directions. It is also meant to show other readers that you are not alone if you find your opinions are narrow, if you are confused about your future or if you are trying to write your synthesis and can't figure out where to start.

Chapter Two sets the stage, describing the experiences and learning that prepared me to understand the AHA moment which taught me the importance of attuning to emotions in my thinking. Learning about assumptions, worldviews and frames of reference in my first CCT course taught me to identify my own. Class discussions helped further my understanding and exposed me to the thinking styles of others; they were my first introduction to the culture of thinking. Through a thinking shift that semester, I started to understand the power of self-reflection, and in subsequent courses I learned reflective thinking tools like freewriting and mind mapping which, when used in conjunction, propel deep self-reflection. These tools are especially helpful to me because I tend to think broadly. Exploring thoughts fully quiets the din of chaos that can inhibit me from thinking clearly. Chapter two also covers the language I learned to describe my thinking. Class discussions helped further my understanding and exposed me to the thinking styles of others; they were my first introduction to the culture of thinking. Through other course work I was surprised to find flow (Csikszentmihalyi,1990) and AHA! moments (Greenwald, 2003) are thinking phenomena that have names and happen to other people. Each has been a common occurrence in my life for as long as I can remember. I detail this in Chapter Two as well as thinking dispositions (Tishman, 1995) or propensities to think in certain ways.

In Chapter Three I recount a particularly intense moment of revelation when I realized attuning to my emotions improves the depth and clarity of my thinking. Through research on emotional intelligence I found a useful metacognitive tool for attending to emotion: self-awareness (Goleman, 1995). In practicing self-awareness, one enters a reflective state to specifically ponder the emotional aspects of a situation. I used this tool

to reexamine my teaching experiences and made a valuable discovery: the emotional impact of the teaching in a poor urban school played a major role in my dissatisfaction with teaching as a career. Finally, I discuss the culture of thinking I am part of as a critical and creative thinker and how it directly affected my learning and self-discovery.

The biggest challenges I faced as I created this final project were deciding which highlights of the journey to incorporate, and figuring out where the paper ends. Even as I type this final draft, my thinking is evolving. One other important skill I learned in CCT is to finish. Completion is an imperative part of the process of creating (Fritz, 1989). When I complete this chapter of my life, I will be free to move on to the next, but not until then. Letting go is difficult but I realize that although this experience will be over, it will scaffold each subsequent one. I've begun creating my own sustainable culture of thinking by connecting with critical and creative thinkers and others who value good thinking in my personal life. I've also joined with other reflective practitioners to organize a group that will support continued implementation of CCT in our lives and work. I've compiled the most influential pieces of my evolution into this paper so that when I find myself lost, reading it will help me remember how I found myself in the first place. When I finish this project I will graduate from the CCT program, but I don't intend to leave it behind.

CHAPTER TWO:

SCAFFOLDING

Serendipity: (noun): The faculty of making fortunate discoveries by accident.

Finding the Critical and Creative Thinking Program

I was lucky enough to be labeled "gifted" in elementary school. Along with the label came exposure to creative problem solving at a young age through Odyssey of the Mind (OM) and Future Problem Solving (FPS) groups. With a team of my peers I learned how to define a problem, brainstorm solutions, establish criteria for evaluating the solutions and finally how to present our findings in a creative, entertaining way. We were encouraged to think big, think wild, think differently. Nothing was impossible. I felt in my element brainstorming, envisioning and creating unique solutions. Through these rich, authentic experiences and others I developed a life long love of learning and confidence in my intellectual ability. In my mind, there was no goal I couldn't achieve if I worked hard enough. I wasn't afraid to challenge a limit or question a viewpoint, and often prided myself on thinking beyond the status quo. After abandoning my medical aspirations, I became a teacher with the intention of fostering similar attitudes in my students.

In teacher education courses I learned about Howard Gardner's (1983) Theory of Multiple Intelligences (MI). In contrast to the traditional definition of intelligence created by IQ tests, Gardner, defined an intelligence as: "an ability or set of abilities that permits an individual to solve problems or fashion products that are of consequence in a particular cultural setting" (Walters & Gardner, 1986). The focus of our current

measures of intelligence on using logical and verbal skills to solve problems reflects the values of our Western culture (Gardner, 1999). Imagine if you will a hunter in the Amazon rainforest listening intently for the soft padding of paws on the moist ground. The instant the animal is within reach she pounces, slaying dinner for her family. The woman's knowledge of her prey and its environment, and the skill and grace she exhibits at capturing it is revered by her culture. They wouldn't help her on an IQ test, however. MI theory currently defines eight real world intelligences:

1. Linguistic intelligence ("word smart"):
2. Logical-mathematical intelligence ("number/reasoning smart")
3. Spatial intelligence ("picture smart")
4. Bodily-Kinesthetic intelligence ("body smart")
5. Musical intelligence ("music smart")
6. Interpersonal intelligence ("people smart")
7. Intrapersonal intelligence ("self smart")
8. Naturalist intelligence ("nature smart")

(Armstrong, 2000)

Gardner (2003) also found some evidence to support spiritual or existential intelligence. The intelligences exist simultaneously in each person in cultures all over the world, working in combination, making each of us a unique individual.

As an undergraduate, I practiced teaching in ways that appealed to different intelligences and aligning the goals of the lessons with state curriculum standards. For example, I taught a noun/verb identification lesson with the lyrics to Raffi's "Shake Your Sillies Out" to fourth graders (linguistic, musical, bodily-kinesthetic intelligences). For one of my favorite lessons, I staged an archaeological dig in the snow to teach science and history to my first graders (bodily-kinesthetic, logical spatial, intrapersonal, naturalist intelligences). We dug up fossils, identified them and then recorded our observations in a journal. At the beginning of the lesson I noticed that one particular student, an

irrepressible ball of energy named Matthew, remained focused on the task of digging his dinosaur bone out of the square I flagged for him in contrast to his usual erratic behavior. Later, Matthew was engaged in identifying the fossil and participated respectfully in class discussion. It was a rewarding experience to reach Matthew and see him interested in learning. This lesson was a stunning example to me of the power of appealing to multiple intelligences.

In the United States there exists a tension between our educational system and our culture: success in schools is increasingly based on scores from standardized tests which measure primarily linguistic, mathematical and test taking abilities, while in society at large success depends on a myriad of other factors. Gardner (1983) and others (Goleman, 1995; Mayer, Salovey & Caruso, 2000; Sternberg, 1996) point out that high IQ scores do not necessarily lead to the best paychecks, partners or life satisfaction. We all know people who "aren't good test takers". In other words, does anybody really care what Elvis Presley got on his SATs? Or what Oprah Winfrey got on hers? How about James Watson, the co-founder of DNA's molecular structure? He often recounts his low IQ scores. His scientific research, however, earned him a Nobel Prize (Sternberg, 1996). (For a more detailed discussion of intelligence theories see Appendix A).

I was fortunate to be strong in the areas of intelligence that are recognized by schools. I didn't sing, dance or run very well, but man could I pass a test! I believe the scores played a major role in earning me a gifted label, which in turn led to exciting learning experiences. To be sure, there were other factors, but I wonder: would they have mattered if my test scores were poor? Defining students with labels and numbers is dangerous business. While my testing experiences were positive feedback that fueled

intellectual curiosity, poor test scores can undermine a student's self-esteem and confidence in learning ability. Gardner's theory was a key element of my development as an educator. Appealing to different intelligences and learning styles to access the potential of each student became important to me, as did fostering positive attitudes towards learning and building self-esteem in students. Armed with enthusiasm, I accepted a teaching position in an urban school district in North Carolina.

Unfortunately, test scores wielded more power over the school system I entered than I thought possible. Budgets depended on the numbers on the bottom line at the end of the year. Promotion was decided by a passing grade on the End of Grade exam (EOG). Each teacher was judged on the basis of their students' results and the sum total of the scores was used to evaluate school and district performance. Teachers whose students did not pass the test were closely monitored in following years and schools faced district or state scrutiny for poor scores. I feared failure. If my students didn't do well not only would they fail, so would I.

How does one fully incorporate multiple intelligences into the intensive preparation this event requires? How do I reach all of my twenty-eight students and appeal to their different learning styles while ensuring they succeed on their multiple-choice final? I sought advice from my mentor who told me explicitly that whole class lecture was the method preferred by many teachers at the school, and that it had worked for her and most others over the past twenty years. "This is how you have to teach *these* kids," I remember her saying during my first evaluation. She was referring to the fact that the students lived in a community where violence and neglect were the norm. Behavior was a constant problem at the school and the students got into less trouble

sitting quietly at their desks than moving around the classroom interacting with each other. When I observed her classroom, it was virtually silent. The students raised their hands to answer questions and worked on worksheets after the lesson individually at their desks. To me, this method was the antithesis of everything I knew about effective teaching. Behavior management was a significant challenge for me, and I increasingly employed whole class lecture as the test loomed because there was a lot of material to teach and not a lot of time. My assessments began to mirror the exams they would be taking in order to prepare them for the EOG. I knew there had to be a better way, but I didn't know what it was and I didn't know where to look for support.

Searching for answers on the Internet, I serendipitously stumbled onto the CCT website. The uniqueness of the program appealed to me, as did the idea of being a learner again studying critical and creative thinking. Teaching wasn't what I expected. In the end, I felt I had been hired to drill information into children so they could regurgitate it on a Scantron sheet. While this is only partially true, the experience made me doubt my career choice. I wasn't sure if teaching was a good fit for me. I mean, I thought I would be great at it, but I wasn't in those first few years. Through CCT I intended to either learn how to manage my inner struggle with testing and become a better teacher or find an alternative professional direction to head in.

Becoming a Critical and Creative Thinker

"Critical thinkers are not to be defined by the worldview(s) they hold, but by the way they hold it (them), by their awareness of radically different worldviews and by a common discovery that they, like everyone else, are at times capable of being not only

wrong but also of thinking irrationally, narrowly, unclearly, imprecisely, superficially, irrelevantly, and inconsistently. They share a real commitment to monitor their thinking to minimize these pathologies of thought" (Paul, 1982, p. 183). I vividly remember the jolt of excitement that coursed through my veins as I read these words three years ago. They empowered me to challenge my opinion on gender equality and let go of the shame I felt when I discovered it was narrow, sheltered and wrong. Through this first thinking shift, I started becoming a critical and creative thinker.

My first CCT course, Critical Thinking (CRCRTH 601) was a three-week intensive introduction to concepts, tool and research. I recall it as the summer I became a feminist. As worldviews, frames of reference, conceptual frameworks and assumptions (Paul, 1982, Warren, 1988, Smith, 2002) were introduced, we took reflective space to observe and evaluate our own. Several course readings examined connections between gender or feminism and critical thinking (Warren, 1988, Clinchy, 1988, Elbow, 1986). During class discussion I felt a familiar resistance: *Ah, the old 'women get the short end of the stick' thing again. Not interested. The truth is, if women would just get to work they could have anything they want. No need for whining, just get out there and do it already! We can do anything men can do. I've never been held back because I'm a girl.*

I've never been held back because I'm a girl. This thought marinated while I read Paul's (2002) words later that night. Our experiences shape who we are and how we view the world. Critical thinkers evaluate and question their thinking. I closed my eyes and reflected on some of the experiences that shaped my worldview. I concluded that my frame of reference on the subject of gender equality was indeed skewed. Growing up my three sisters and I were taught we could do anything we wanted. There was no such thing

as being limited by gender. If you really want something you just go and get it. My conceptual framework didn't develop in a vacuum; I never felt oppressed because of my sex. Based on my experiences, I was working with the fallacious assumption that sexism doesn't exist

To examine a broader perspective, I employed connected knowing (Clinchy,1989), a thinking strategy in which one observes another viewpoint from within. Suspending judgment and stepping into another's position, empathizing with them, thinking with them, practicing imaginative attachment to their opinion leads to a deep understanding. Using this technique, similar to Elbow's (1986) methodological belief, I adopted a feminist perspective, starting with the belief that sexism exists. I contemplated our society's patriarchal structure, the "old boys clubs" I am familiar with and the "glass ceiling" of workplace renown. I looked for hard evidence of oppression on the Internet and found innumerable statistics to support its existence. Women are paid less for the same work, hold fewer powerful positions and are more likely to be victims of domestic violence than men (www.now.org). Although most of this information was not new to me, believing instead of doubting it brought waves of feeling I wasn't expecting: frustration that I had been lying to myself, gratitude that I had so many opportunities, shame that I assumed everyone is capable of overcoming their circumstances, confusion over what to do next, but most saliently, intense anger that women could be systematically dominated by men and awe at the totality of factors that influence the system of oppression.

As I stepped back into myself, I marveled at how conscious, open-minded acceptance of another perspective could cause me to find some truths in it and thus begin

amending my personal beliefs. While I didn't wake up the next morning a radical activist for women's rights, I did become more aware of the language I use, removing phrases like "cries/runs/throws like a girl" among others from my vernacular, and increased my consciousness of the position of women in societies all over the world. I also pay attention to the sexual politics of my workplace. All feminists agree on three things: sexism exists, it is wrong and it must be eliminated (Warren, 1988). Based on this definition, I now consider myself a feminist. As I continue to become more knowledgeable, I find myself increasingly motivated to discuss gender inequity with those around me. I've engaged in some interesting conversations with others about their views on the topic and I continue to question my own thoughts.

Recognizing the worldview, frame of reference and assumptions that formed my opinion led to questioning and analyzing what my beliefs are and where they came from. They have been shaped over the course of my lifetime, so this is not a simple task. It takes time and tools to get to the underlying assumptions that scaffold my thinking. Critical thinkers strive to improve their thinking, which can be a messy, sometimes arduous process. Through this first thinking shift, I started to become a more critical thinker, and it marked the beginning of my evolution into a reflective practitioner.

Acquiring Reflective Thinking Tools

As a reflective practitioner, I am committed to the process of thinking evolution, which begins with metacognition. Metacognition is defined by Matlin (1998) as: "our knowledge, awareness and control of our cognitive processes" (p. 256). Costa (1984) defines it as "the ability to know what we know and don't know" (p. 18). As humans, we

have the ability to engage in reflection and inner dialogue with our thinking: to think about our thinking. Although most individuals are capable of metacognition, it is a skill that requires practice. Research shows that while we may be able to easily recognize the product of our thought processes (i.e. the answer to a question, the solution to a problem), the steps we took in creating that product are significantly more difficult to identify (Matlin, 1998). Learning to document the process is part of the CCT experience. In most courses we were required to keep a journal to record our reactions to readings, processes and experiences. Looking back at my reflections, I can trace the evolution of my thinking over the semester. In group-process immersion courses like Problem Based Learning (CRCRTH 640), Innovation and Invention (CRCRTH 612) the journals document the evolution of our ideas from brainstorming to final product as well as the development of our team. They are a continued source of inspiration for future endeavors.

Writing thoughts down without thinking about them, I quickly discovered, is an effective strategy for deeper exploration and for clearing away cobwebs. Freewriting (Elbow, 1998), is a technique that can be used anytime, anywhere to "un-stick" oneself. The procedure is simple: write without stopping. Sometimes inspiration arrives and the writing is useful and other times it is stream of consciousness that seems irrelevant. I find this technique especially useful in directing my thinking. When writing a paper, for example, I can get stuck in the middle of a paragraph looking for the perfect words to describe my thoughts succinctly. Agonizing over words leads to time wasted worrying and over-thinking my work, which then leaves me blocked and frustrated. The

freewriting technique allows me to ramble endlessly, dancing around the point of the paragraph until I find the right words.

Sometimes I discover it's not the paragraph tripping me up, instead the section or the entire paper needs to be restructured. Other times I find the words to hit the proverbial nail on the head and move on. Sometimes the problem is there is something other than the paper on my mind and giving it attention frees it from blocking my thinking. When I write now, I open a second document called "space". In my space, I am free to let my mind wander, exploring different lines of thought, making to do lists, complaining, free associating or repeating a mantra. Clearing away the clutter makes it easier to focus on the task at hand and having space to work out my ideas points me in the right direction.

Freewriting can also aid in personal decision-making (Elbow, 1998). Allowing the mind to consider possibilities in depth without limits leads to a clearer picture of each alternative and helps put things in perspective. This strategy has been valuable for me, as I tend to vacillate between options before making decisions. Writing it all down lets my thoughts flow and gets to the root of the indecision. A particularly memorable freewrite occurred at the beginning of my synthesis when I was desperately trying to answer the question: what do I want to be when I grow up? I felt I couldn't leave CCT without knowing the answer to this question, and I wanted my synthesis project to support the next chapter in my life. After several pages, I uncovered an idea that warranted further scrutiny: I wasn't looking for the right career, I was searching for self-definition in a job description. This insight led my work in a deeply reflective direction and ultimately led to the synthesis paper you are reading at this moment.

Another reflective tool I find useful in guiding my thinking is mind mapping. Originally introduced by Tony Buzan in the 1960s, mind mapping is a visual free association technique that has many applications from goal setting to problem solving to organizing information (King as cited by Frangie, 2004). The process begins with a blank sheet of paper and a writing utensil. (I've learned I'm partial to a piece of poster board at my extra large coffee table or a chart sized Post-It stuck to the wall and a collection of colored, scented markers.) In the middle of the paper write the topic. Draw lines out from the topic in all directions, putting one idea at the end of each line. Connect each idea to a new one until the paper fills up. Finally, using different colored markers, connect ideas from different branches of the diagram.

This technique can be used to generate ideas, identify hidden connections and to ferret out superfluous lines of thinking. Freewriting complements mind mapping. It can be used before mapping to loosen up ideas and/or after to synthesize thoughts and ponder unexpected connections. Used in combination, I've found these two reflective tools create an effective thinking strategy for me. I tend to think broadly, sometimes disjointedly, to the extent that I can't get my arms around an idea because it keeps growing, changing and expanding. Taking time to see my thoughts sprawled on a mind map then reflecting on them in a freewrite facilitates focus and direction in my thinking whether I am writing a paper, making a decision or simply engaging in self-reflection to better understand myself.

Learning the Language of My Thinking

"Good thinking is a mind set, a collection of attitudes and inclinations with which one approaches thinking" (Tishman, 1995, p. 43). Although thinking skills and abilities such as deductive and inductive reasoning, creative problem solving and metacognition are conducive to effecting thinking practices, possessing abilities does not necessarily mean that one is an effective thinker. What characterizes an effective thinker are the inclinations or tendencies she holds to employ her thinking abilities in a particular way. A *thinking disposition* is an ongoing propensity in thinking behavior that is exhibited over time across diverse thinking situations. For example, a person might be inclined to be playful and adventurous, taking thinking risks and be open-minded. This person exhibits the disposition to think broadly and adventurously (Tishman, 1995). Other examples of effective thinking dispositions include: the disposition to reason carefully and logically, the disposition to be curious, the disposition to be persistent or the disposition to question and explore. Adept thinkers have abilities such as metacognition, reasoning and empathy at their disposal to consistently be curious, persistent or questioning in their thinking. I tend to think broadly and adventurously, and need to consciously work to be more persistent and focused in my thinking.

Using reflective thinking tools can lead to interesting connections, unexpected insights or intense moments of clarity. Before I knew what they were called or how to encourage them, I relied on these moments to tell me when I've made the right decision about my life and to move my thinking in new directions. In Creative Thinking (CRCRTH 602), I learned they are called "AHA!" moments (Greenwald, 2003). How validating it was to share the precious AHA! experience with other Critical and Creative

Thinkers! In the past, I felt foolish describing my AHA! moments and where they led to others, but in a community of Critical and Creative Thinkers, AHA! moments are significant thinking leaps that deserve to be discussed.

The physiological thrill of an AHA! moment is tough to match. In an instant a new solution or idea is born and the verbal expression of the experience, if words can be found at the time, is "AHA!" For me, a pivotal AHA! is marked by a surge of adrenaline, a feeling of ecstasy and the uncontrollable urge to laugh out loud. AHA!s happen suddenly, sometimes out of the blue, usually after a problem or question has stumped you and you've moved on to something else. Giving thoughts time to marinate in the back of your mind, allowing them to continue processing in the unconscious while your attention is focused elsewhere, facilitates AHA! moments. I imagine this is what Archimedes experienced when, after wracking his brain unsuccessfully for a way to test the composition of the King's crown, he discovered volume could be measured by water displacement as he slipped into the bathtub one night and the exclamation "Eureka!" was purportedly born (Wilton, 2005).

AHA! moments are an invaluable part of the creative process. For example, when we were assigned self-selective biography presentations for Creative Thinking class, I immediately chose one of the most creative people I could think of: Dr. Seuss. I read everything I could find about him, but found myself stumped for a presentation idea after several weeks. Searching for inspiration one night, I stopped at Barnes & Noble and headed for the children's section, to surround myself with Dr. Seuss's colorful characters. On an end cap, a book called Heroic and Outrageous Women (Alexander, 1999) caught my eye and I stopped to flip through it. In this volume, I stumbled upon the amazing

story of Dr. James Miranda Barry, a woman who, masquerading as a man for 45 years in the British military, performed medical miracles, such as performing the first caesarian section both the mother and child survived and introducing the smallpox vaccine in South Africa, 20 years before it was introduced in England (Kronenfeld, 2000). Dr. Barry was the Inspector General of Hospitals in Canada when she retired. It wasn't until after her death that her true gender was revealed.

AHA! Within seconds of reading an abstract of her biography my presentation was outlined and I couldn't wait to get home to work on it. The presentation a mere two days later was exhilarating. I actually heard the audience gasp as I performed a mock caesarian section on a pillow with a baby sewn into it, told the story of Dr. Barry's life in a eulogy and finally revealed her gender deception at the end in a mock newscast. The unexpected flash of insight I experienced in the bookstore motivated me to create a presentation I was very proud of. While Dr. Seuss himself was exceptionally creative, Dr. Barry's courage and passion inspired my own creativity.

AHA! moments have also been instrumental in making decisions about my future. I often wrestle with life choices, which I chalk it up to being a Libra (balance), lacking boundaries to define what is possible (which I perceive as a positive attitude) and being open-minded enough to seriously consider every alternative in depth. For several months during my first year of teaching, I wavered between leaving my position and giving it another shot the following year. As the date for decision loomed, I became more confused and uncertain. On the plane to Florida for spring break I looked out at the sun, the clouds and the endless blue sky and in a split second decided to stay at my job. The weight of the world was lifted from my shoulders as I confidently made my choice. I had

a physical response to it, a gut feeling that meant the decision didn't need another thought. AHA! moments tell me when I'm headed in the right direction.

An AHA! moment during a thinking process is similar to a chemical reaction, its by-product, motivation to persist towards the goal. Continued, intense focus on a task can lead to the state of "flow". Goleman (1995) describes flow as a state of self-forgetfulness; the surrounding world disappears and all attention is focused on the task at hand. It is marked by feelings of rapture, ecstasy or spontaneous joy and thus is intrinsically rewarding. Flow is found between boredom and anxiety; when the task challenges the skill of the individual slightly beyond her limits, but not so much that she feels anxiety (Csikszentmihalyi, 1990). In the flow state, a person performs at her peak, her responses perfectly attuned to meet the changing demands of the task. Athletes know this state of being as "the zone" (Goleman, 1995). It is a state of optimal experience (Csikszentmihalyi, 1990).

Typically, I am able to access flow only at the last minute, like the night before the project is due. I know the state of mind and count on it to get my best work done, but it's difficult to access on demand. I hit flow in creating my presentation about Dr. Barry; the words and ideas just came. I remember spending many nights at a 24-hour Kinko's in college, creating masterpieces. Through CCT I've learned that maintaining focus is the key to accessing flow. It's the pressure to finish when the deadline is near that compels me to focus intently on my task, thus facilitating entrance into flow.

Learning words like "flow," "AHA! moments" and "thinking dispositions" help me describe my thinking to myself and others. Through reflective thinking tools such as mind mapping and freewriting I'm able to recognize and explore my thinking. Through

CCT I've learned that my beliefs can be fallible, my assumptions can be erroneous. To become a reflective practitioner I've committed to constant monitoring, challenging and improvement of my thinking. This learning scaffolded the self-reflective journey I engaged in during the creation of this synthesis and the profound self-understanding it led to.

CHAPTER THREE

REVELATION AND FURTHER EXPLORATION

Have the courage to follow your passion – and if you don't know that it is, realize that one reason for your existence on earth is to find it.
-Oprah (Winfrey, 2001)

Reflection #1: Pandora's Heart

I started the synthesis process intending to create a final product that would scaffold the next step of my life. The trouble was I hadn't figured the next step out; I was still waiting for the AHA! moment that would point me in the right direction. A series of fits and starts at the beginning of the process left me even more confused. Where was I going from here? I had learned to be reflective, but none of my reflecting had answered the plaguing question: what do you want to be when you grow up? Unpacking this query in a freewrite, I found a more pressing question underneath it: who am I? I thought I was an educator, but my recent teaching experience made me doubt my aspirations.

Searching for insights about my identity, I spent an evening creating a timeline of my life from birth to the present, listing every important event I could think of. After a couple of hours, I hadn't had the epiphany I was hoping for. Overwhelmed with frustration and feeling no closer to the heart of my synthesis, I put my colored markers down and went to bed. The next morning I inexplicably woke up crying. Attributing it to fatigue, stress or a bad dream, I raced off to work, late again.

Tears sprang into my eyes constantly when the phone rang, when my boss asked me to proof read a document, when I went to lunch, while responding to a client's email or when anyone asked me what was wrong. By the end of the day I was biting back sobs. After work, I drove home and collapsed, bawling, onto the couch. "I don't know what's wrong with me" I told my roommate. I knew I had several balls in the air, as I often do, trying to balance school, my full time job and some semblance of a social life, but I had never experienced a breakdown quite like this one. I had no control over the tears and could not readily identify a specific reason for them.

Fortunately, that night was a Tuesday. On Tuesday nights a group of women gather at my house for "Girls Night". We spend the evening together eating Thai food, drinking wine and talking about every aspect of our busy lives. Over the months we've been meeting, a deep level of respect and trust has developed amongst us. The safe space we've created facilitates discussing intensely personal experiences without the fear of being judged. Advice is sometimes offered, different perspectives are given and thinking is analyzed. Working through life together has forged a close bond between us.

On this particular Tuesday, I responded to the usual check in questions by saying that I was upset about not being further along with my synthesis. This comment quickly segued into an emotional soliloquy that seemed to tumble out of my mouth before I could think about what I was saying. I shared frustrations and doubt about my synthesis. "I can't do this because I didn't really learn anything in the last two years. I always manage to fool teachers into giving me good grades without really learning anything but they're going to catch me this time. And everyone is going to know I am a fraud!"

I talked about the grief I was feeling because that day was the one-year anniversary of my grandfather's death and a week later would be the one-year anniversary of a close friend's tragic death. I couldn't believe a whole year had gone by without them and I felt bereft knowing I wouldn't see either of them ever again. Also, sitting in front of my computer all day at a mundane administrative job was draining me physically and mentally. Most of the time I was able to transcend the feeling that I was wasting my energy and talents by focusing on the fact that my bills were paid, but with everything else on my mind, I was unable to let go of the frustration. I didn't know where else I would go, either. I'd tried several different careers and none of them were right for me. "Why can't I decide what I want to do with my life?" Much to my surprise I also admitted that I was with the wrong partner in my personal life. As these thoughts came out of my mouth I realized, for the first time, how I truly felt.

It was as if each feeling I spoke was brand new to me: grief, anger, self-doubt, frustration, fear. After acknowledging them, I felt liberated. In the gentle discussion that ensued, my friends pointed out that I deny a lot of negative emotion. I tried to explain that I choose to focus on the bright side of things; my glass is always half-full. I don't like to wallow in feelings of anger or sadness because it makes me unhappy. I prefer to smile and continue on with my life. "It doesn't seem to be working though." I laughed through my tears.

I suddenly saw the highly efficient mechanism I have developed for avoiding negative emotion. It is fueled by the erroneous assumption that showing negative emotions, like fear, anger or self-doubt, shows weakness. Over the past two years I'd learned to understand, respect and accept the thinking of others. I'd developed an

admiration for people who can talk openly about their feelings, but I continued to censor my own. That night my emotions took complete control of my voice and each one came rushing out in a torrent of excited words. I spoke before I could think. As I heard my thoughts, I began processing them. Through this cataclysmic reversal I could see the destructive power of unprocessed emotion. The emotions were there, whether I wanted them to be or not; not attending to them made it impossible for me to think clearly about my identity or what direction I wanted to take with my life.

Emotional Intelligence

Intrigued by the influence of emotions on my thinking, I began researching the concept of emotional intelligence (EI). Understanding the emotions of oneself and others is a component of Sternberg's (1996) practical intelligence and Gardner's (1983) interpersonal and intrapersonal intelligences. In the early 90s studies on emotion began appearing in academic journals and in 1995, Daniel Goleman released a book on EI that quickly pervaded popular culture. In his book Goleman (1995) made strong assertions concerning the influence of EI on individuals and society, claiming learning to manage emotion effectively could not only alleviate violence, teen pregnancy and drug abuse in our culture but could ultimately lead to increased life satisfaction and success (Mayer, Salovey & Caruso, 2000). Other research on EI focuses on the connections between emotions and reasoning as well as using emotions to facilitate thinking (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2000; Mayer, Salovey & Caruso, 2002).

There are conflicting models of emotional intelligence, most notably Goleman's five-domain model (1995) and Mayer & Salovey's (1997) Four Branch Model. Goleman

(1995) based his theory on the work of neuroscientist Joseph LeDoux who discovered that while sensory input normally travels to the neo-cortex where it is processed before signals are sent to the amygdala for emotional response, sensory input also travels a separate route *directly* to the amygdala and the emotional response to it can precede cognitive processing. He terms this experience an "emotional hijacking" and purports this pathway is responsible for actions during fits of passion that are later regretted. (For a more detailed description of Goleman's EI Model see Appendix B).

Mayer & Salovey, in contrast, base their work in cognitive psychology, defining EI as: "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth." (1997, p. 5). "In other words, emotional intelligence refers to the ability to process emotion-laden information competently and use it to guide cognitive activities like problem-solving and to focus energy on required behaviors (Mayer, Salovey & Caruso, 2002, p. 2). (For a complete description of the Four Branch Model see Appendix C).

When I came across Goleman's (1995) definition of an "emotional hijacking," I immediately connected it with my experience that Tuesday. As I continued to learn more about EI, I developed a respect for emotions in my thinking. In the past I would always shy away from reflecting on my feelings because they were intangible, sometimes unpredictable and seemed unimportant to me. Having learned to be a reflective practitioner, I wondered how emotional mismanagement or suppression had affected my thinking throughout my life. Through EI research, I acquired a metacognitive tool that would enable reflecting on this quandary: self-awareness.

Self-awareness (Goleman, 1995), the basic tool of emotional intelligence, is closely entwined with metacognition, but refers to reflecting specifically on feelings rather than thought processes. Identifying and accepting emotions as they occur is the first step in managing them intelligently, just as examining and assessing thinking processes scaffolds enhanced cognitive performance. Because emotions directly affect cognitive processes (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2000; Mayer, Salovey & Caruso, 2002; Palfai & Salovey, 1993), attuning to them an imperative aspect of metacognition.

Reflection #2: I Can See Clearly Now

I revisited my timeline the next evening and began jotting down the emotions I could remember feeling during the events I had listed. A pattern swiftly emerged: when I was unhappy with my life, I would uproot and head somewhere else to start over. Each time, I would dive wholeheartedly into a new endeavor, and each time I would end up leaving for a new adventure in about two years. This pattern spans the past decade of my life.

My previous adventure, teaching in an urban elementary school, ended in 2002 because I developed a vicious resentment for the pressure to perform on high stakes tests (or so I told myself). I felt burnt out and uncertain that education was the field for me. Focusing on the emotions I've experienced (or tried to avoid experiencing) proved to be the lens I needed to see Michelle Morgan clearly. I could see that although the testing was frustrating, I left teaching because I felt like a failure and because I felt helpless to affect the horrific reality of my students' home lives.

One of the major challenges for me was behavior management. This is the cornerstone of good teaching practice. It seemed to me that no matter what strategy I used, my class wouldn't behave. Reflecting on the emotions I avoided during those two years, I saw clearly what held me back from managing classroom behavior effectively. I was truly horrified by the crime, neglect and abuse my students lived with. When students came to school sick, tired or scared, I felt absolutely helpless. I had one young girl who was tied up on Christmas Eve and forced to watch while her mother and older sister were brutally raped before the attackers made off with all the presents under the tree. Other students suffered beatings, were left home alone for long periods of time or bounced from foster home to foster home. Many of their parents were my close to my age (22) and on more than one occasion a parent showed up for a conference under the influence of alcohol or drugs.

I was ashamed of how privileged my upbringing was and some days, I didn't think I had any right to be standing in front of those students because of it. While social services were involved with the home lives of several students, the system has its limitations. I made it my mission to inspire hope for the future and pride in each of my students. Without much parental support, though, I could only pray that I got through to my students and that they would remember how wonderful they are when the going got tough.

I loved my students very much. It was difficult to discipline them consistently because I knew they didn't always get affection or attention at home. Sometimes I would see pain on a student's face and my heart would break. If the student misbehaved, I believed it wasn't out of disrespect for me. It was a reaction to his or her own personal

hell and school was a much safer place to act out. I held the students accountable for their behavior most of the time, but I would soften the consequences based on the particular situation. This strategy was ultimately my undoing. By not consistently enforcing the rules, I gave up some of my power. Students knew that although they might be punished, they also might get off with a lighter sentence. To them my reasoning didn't matter; all that mattered was that they knew they could potentially manipulate me.

Now I realize that providing swift, uniform enforcement of the rules would have been beneficial. It would have given the students more concrete choices. They would have known that if they choose to exhibit behavior *x* they would suffer consequence *y*. They would become responsible for their own choices. I didn't do them any favors by letting them off easy because then they learn that laws don't always apply to everyone in the same way. Inconsistency was part of my discipline problem.

The other part of the problem is that I was brand new. It is unrealistic that I would walk out of college and be an excellent teacher on my first try. I had extremely high expectations for myself and not meeting them caused me to feel like a failure. This is a personal challenge I often face. I hold myself to very high standards because I feel I should be able to meet them. Instead of recognizing that I made some mistakes and did some things right, I wrote the whole year off as a failure. This practice is very detrimental to my self-confidence and personal wellbeing.

Confronted with all of my emotions on the timeline I created, I understood how they affected my actions. Had I recognized and processed these feelings at the time, I may have felt differently about teaching. I might have realized sooner that effective behavior management was the best way to love my students. I may have cut myself some

slack in those first two years of teaching and not burnt myself out trying to be perfect. My EOG scores *did* evidence each student's growth over the year they spent in my classroom and I *was* able to connect with most of my students. Had I accepted this success, perhaps I would have stayed on at that school and become the excellent teacher I thought I could be.

One thing is for certain, I didn't leave teaching solely because of pressure to perform on high stakes tests. I left for many other reasons, the most prominent being that I wasn't able to effectively manage the emotions that I felt on a daily basis because I tried to push them away. I do not have the power to control time constraints, home lives, or testing. I can't control the financial limits on the school budget that left me without any assistant or helper with my twenty-eight students, seven of whom had Individualized Education Plans requiring instructional modifications. What I *can* control is how I act in response to what I feel. I can do this by practicing self-awareness (Goleman, 1995) through reflection and by making the conscious choice to manage my emotions effectively. Perhaps education is the field for me and perhaps not. I now understand that emotions played an important role in my teaching experience and I can use the self-understanding I gleaned from unpacking them to guide my path in the future.

A Culture of Thinking

Tishman (1995) would describe the CCT program as a culture of thinking: "broadly, the notion of culture refers to the integrated patterns of thoughts and behavior that bind together members of a group" (p. 2). The CCT culture focuses on thinking. As a diverse group of open-minded professionals, we explore thinking on many levels. I

embarked on my personal journey toward self-understanding in a community of individuals with different thinking styles, strengths and intelligences who were also learning to become self-reflective. I met and admired peers who were already deeply reflective and self-motivated to create something wonderful. Struggling with others in this environment makes it easier. Even if you don't know exactly what the other person is going through, you practice connected knowing (Clinchy, 1998) and empathy (Gallo, 1989), in which you suspend judgment and take on the perspective and emotions of another, to fully understand their experience. As reflective practitioners we also share a commitment to investigate our thinking, so dialoguing about the inner workings of your mind is accepted and encouraged. Through the support of this culture I was able to delve deeply into myself.

Each of the six dimensions of good thinking Tishman (1995) discusses in her book: a language of thinking, thinking dispositions, mental management (metacognition), the strategic spirit, higher order knowledge and transfer, is an element of CCT. When I read this book in my first CCT course I was excited, because I thought I had found a holistic approach to encouraging good, inquisitive thinking in my classroom. Indeed one of my first journal responses to the reading says: "I can't wait to get back to the classroom! I feel like I've figured it out already!" While this was a bit capricious, through immersion in the culture over the last three years, I understand that creating a culture of thinking is in fact the answer to my quandary of how to teach thinking while preparing students for standardized tests.

The culture encompasses the entire realm of experience in the classroom and within that culture the students learn the information they need to pass the test. In CCT,

for example, I learned thinking theories and tools, philosophy and cognitive psychology in a culture that encouraged me to apply this higher order knowledge to my own pathologies of thought. While the culture supported my focus on a personal thinking evolution, I feel confident that I could pass a test on specific tangible skills like using the Problem-Based Learning Model (Greenwald, 1999) to design an interesting, engaging lesson for future students. The secret to developing good thinking is participation in a culture that supports its development.

CHAPTER FOUR

SYNTHESIS

We've taught you that the earth is round,
That red and white make pink,
And something else that matters more-
We've taught you how to think."

~Miss Bonkers
Hooray for Diffendoofer Day
(Seuss, Prelutsky & Smith, 1998)

At the beginning of the process of creating it is not necessary to have a distinct vision of the final result. It is sufficient, says Fritz (1989) to have a clear enough picture that you will know the final product when you see it. You begin with a vision that does not take into account how you are going to get to the final product. Once the vision is articulated, the process continues and the product takes shape. At the beginning of synthesis, I wanted to create a product that would encompass all of the learning I did in the CCT program and serve as a reference for me in the future. It took almost a year for me to create this synthesis, but I wrote the final drafts, I knew I had achieved my vision.

The final stage of creating is completion. Without this stage, the work is not finished. Completion means accepting your creation into your life (Fritz, 1989) and is an imperative part of creating, the final step that releases energy which propels the germination stage of the next creative cycle. In completing this CCT synthesis and accepting the fruition of my journey, I am allowing it to scaffold the next chapter of my life. (For a more detailed summary of Fritz's work see Appendix D).

The level of self-understanding I've reached was possible because of the CCT culture. Still, learning volumes about the person I've become and the elements of my thinking that led me to the decisions I've made didn't lay out my future clearly for me. I can't answer the question "what do you want to be when you grow up?" with a one word answer like "teacher", but I've stopped trying. The truth is I'm already grown up. Answering this question does not take away the ambiguity of the future or the challenge of making career decisions. Contrary to my former perspective, there isn't a job or career out there that's exactly what I'm looking for; satisfaction with my life will not come from choosing the right career. Instead of choosing a career path, I choose to lead a satisfying life, rich in learning experiences, reflection and growth. The tools I've learned for understanding my thinking will continue to help me as I choose future directions and reflect on the outcome of different directions.

How thankful I feel for the serendipitous discovery of the CCT program! In a culture of thinking I've learned to recognize, evaluate, improve and support my own thinking as well as how the community itself contributes to good thinking. Through the synthesis process, I've taken the time to reflect deeply on my past experiences and uncovered the influence of emotions on my thinking and personal decision-making. I've traced and recorded the evolution of my thinking throughout my CCT journey. And most importantly, the angst over "what I want to be when I grow up" has ended, as I am no longer desperately searching for a career to define myself with.

I've learned that educating others is important to me and I was right to choose teaching as a career path. With the continued support of my culture of thinking I'll apply the knowledge and tools I've acquired to finding my niche in education. I will continue

to evolve, as will my thinking and self-understanding. Over the next few months, my next goal is to find inner peace, which I will seek through relaxation, meditation, and letting my CCT experience marinate. Supported by this exquisite experience, I exit CCT more comfortable with the ambiguity of the future and confident that the thinking tools and strategies I've learned here apply to any direction I choose to travel in.

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APPENDIX A

A BROADER DEFINITION OF INTELLIGENCE

In the late 20th century, Alfred Binet, a renowned psychologist, developed a psychometric measure of intelligence for the French Ministry of Education that would help schools determine which children would be successful. The test score, an intelligence quotient (IQ) is a measure of the ratio between a persons' chronological and mental ages, the higher the better. By the 1920s, IQ tests were standard in the United States and most of Western Europe. They were used to discern between the "gifted", "feeble minded" and "normal" students (Gardner, 1999). Those with high scores were considered highly intelligent and expected to achieve great success in life.

Today, however, high IQ scores do not necessarily mean an individual will be wildly successful. "At best, IQ contributes about 20% to the factors that determine life success" assert Goleman, (1995, p. 34) and Mayer, Salovey & Caruso (2000, p. 403). The totality of other characteristics a person possesses is not taken into account with this one measure of narrowly defined intelligence. In an ongoing study following valedictorians from the class of 1981 in Illinois, researchers are finding that although they continued to excel and achieve high grades in college, by their late twenties the valedictorians had climbed to only average levels of success. Although these students did extremely well in school, this proves only that they are capable of achieving within that system; however, academic excellence offers no preparation for the turmoil or opportunity life brings (Goleman, 1995). James Watson, the co-founder of DNA's molecular structure, for example, often

recounts his low IQ scores. His scientific research, however, earned him a Nobel Prize (Sternberg, 1996).

A Broader Definition of Intelligence

A broader definition of intelligence was proposed by Harvard psychologist Howard Gardner (1983). Gardner's theory of Multiple Intelligence (MI) identified seven different intelligences: musical, bodily-kinesthetic, logical-mathematical, linguistic, spatial, interpersonal and intrapersonal. Since introducing the theory, he has added two additional intelligences: naturalist and existential. The theory maintains that all of the intelligences exist independently in each individual, meaning a person may not necessarily demonstrate the same level of ability across all intelligences (Walter & Gardner, 1986). For example, an athlete may have a particularly high level of ability in bodily-kinesthetic intelligence, but a markedly deficient ability in linguistic intelligence. The athlete would still be considered intelligent.

MI theory contrasts with the psychology's traditional logic of identifying an intelligence, which is: "(a) to define it, (b) to develop a means for measuring it, (c) to document its partial or complete independence from known intelligences, and (d) to demonstrate that it predicts some real world criteria" (Mayer & Salovey, 1997). Gardner, on the other hand, defined an intelligence as: "an ability or set of abilities that permits an individual to solve problems or fashion products that are of consequence in a particular cultural setting" (Walters & Gardner, 1986).

To critics who claimed his intelligences were nothing more than talents or gifts, Gardner & Walters (1986) responded: "There is nothing magical about the word 'intelligence'. We have purposely chosen it to join issue with those psychologists who consider logical reasoning or linguistic competence to be on a different plane than musical problem-solving or bodily-kinesthetic aptitude. Placing logic and language on a pedestal reflects the values of our Western culture and the great premium placed on familiar tests of intelligence" (p. 175). According to multiple intelligence theory, every individual is intelligent, but not necessarily in the same area.

Our educational system currently does not encourage exploration of personal talents and interests, as a student's aptitude is measured by her performance on tests of logical/mathematical intelligence and linguistic intelligence. These tests, Gardner contends, "are based on a limited notion of intelligence, one out of touch with the true range of skills and abilities that matter for life over and beyond IQ" (Goleman, 1995, p. 38). By broadening our definition of intelligence, education can help children toward a field where their talents will be best put to use, where their passions lie naturally and where they will feel satisfied and be competent. We should teach children there are many ways to succeed and many abilities that will get you there (Goleman, 1995).

Successful Intelligence

Robert J. Sternberg (1996) defines successful intelligence as thinking well in three different ways: analytically, creatively and practically. His Triarchic Model of Intelligence is based on an increasing body of research that shows analytical intelligence,

which is the type most valued in schools, is not as useful in the world at large as creative or practical intelligence.

To illustrate this point, Sternberg (1996) tells the story of two boys who happen upon a hungry grizzly bear in the woods. The first boy, exhibiting remarkable analytical intelligence, calculates the exact second the bear will reach them. The second boy changes into his jogging shoes. The first boy says: "We'll never outrun the bear". The second boy answers "That's true. But all I have to do is outrun you!" (p. 127).

Analytical thinking, the type exhibited by the first boy in Sternberg's (1996) story, is required to reason, to solve problems, or to compare and evaluate solutions. IQ tests and the standardized tests that are used to evaluate students in today's educational system, such as the Graduate Record Exam (GRE), Scholastic Aptitude Test (SAT) and Massachusetts Comprehensive Analysis of Skills (MCAS), are effective measures of analytical intelligence. In our schools, high analytical intelligence is often enough to guarantee advanced placement, secure Ivy League college admissions, and earn the student the prized "gifted" label. Analytical thinking skills are necessary in some areas of the business world, in scientific research and in governmental agencies; however, superior analytical intelligence alone is not enough to ensure stellar real world success.

Analytical intelligence may be useful in analyzing and memorizing other people's ideas, but generating new ideas requires creative intelligence (Sternberg, 1996). Creatively intelligent individuals are adept at discovering, innovating and inventing. It is creative intelligence that keeps companies ahead in the marketplace by having the new bigger, better, faster product first. This type of thinking is often discouraged in schools because it can be perceived as disruptive. At most schools, there are no measures of

creative intelligence. There are no check boxes on report cards for creative ability. Creatives, however, could grow up to become wildly successful actors, artists, musicians or inventors, among a myriad of other things. While these professions are valued by our society, the skills necessary to succeed in them are not encouraged by our educational system.

The second boy in Sternberg's (1996) story exemplifies the third aspect of successful intelligence: practical intelligence, or "street smarts". The boy may not have the analytical ability to configure the point of impact, but he has the practical ability to know that outrunning his friend would keep him alive. This type of thinking is not taught in schools, it is developed through life experiences. Practical intelligence includes reading people, interacting with others, correctly interpreting and appropriately responding to nonverbal communication, and adapting successfully to a given situation (Sternberg, 1996). Excelling in these areas can lead to high levels of success in many careers.

To test his intelligence theory, Sternberg (1996) ran a five-year study at Yale University with 199 high school students from all over the world, who exhibited varying levels of each intelligence. He divided the students in five ability groupings based on results from a test that evaluated analytical, creative and practical intelligence in four domains: verbal, quantitative, figural and essay. The groups were comprised of individuals who scored high in analytical, creative or practical intelligence, individuals who scores highly in all three categories and students who scored relatively low in all three categories. The students participated in an introductory psychology course. All students were given morning instruction by the same professor.

In the afternoons students were divided into four groups and received instruction that emphasized analytical intelligence, creative intelligence, practical intelligence or memory (like most introductory level courses). Some of the students received instruction that matched their natural abilities and some did not. The results of the study showed that students who received instruction that matched their natural abilities performed better than those who did not. Other findings included: it is possible to test for creative and practical intelligence as well as analytical intelligence and it is possible to teach in ways that improve all three aspects of intelligence (Sternberg, 1996).

"We produce successfully intelligent people by making some things easy and others hard and by allowing students to both capitalize on their strengths and to compensate for their weaknesses, as well as to make the most of their natural abilities" (Sternberg, 1996, p. 150). Successfully intelligent people, according to Sternberg (1996), not only possess all three aspects of intelligence, they reflect on when and how to use each effectively. Our schools might prepare students more suitably for the real world if they valued creative and practical intelligence in addition to analytical intelligence, as *all three* are valuable in our society.

APPENDIX B

GOLEMAN'S THEORY OF EMOTIONAL INTELLIGENCE

Recently, popular culture has embraced the concept of "emotional intelligence". In 1995, Daniel Goleman, a psychologist with a Ph.D. from Harvard University, published the book Emotional Intelligence. In it he reviewed MI theory and found that Gardner's view emphasizes cognition. Hyperfocus on cognition, Goleman purports, is owed to behaviorists like B. F. Skinner, who decided because aspects of inner life, such as emotions, could not be viewed objectively from the outside or studied with scientific accuracy, they were off-limits to psychology. In Goleman's words, those who believe emotions have nothing to do with intelligence "have been seduced by the computer of the operative model of the mind" (Goleman, 1995, p. 40). The mind is not strictly input output, rather rationality is guided by feeling. In Goleman's view, emotional intelligence is the key to success in life.

Goleman uses the term emotion to refer to a feeling and its distinctive thoughts, psychological and biological states, along with their blends, variations, mutations and nuances. Indeed," he continues, "there are more subtleties of emotion than we have words for" (Goleman, 1995, p. 289). Drawing from the work of renowned Yale psychologist Peter Salovey, Goleman's model of emotional intelligence divides emotional ability into five domains:

1. *Knowing one's emotions.* Self-awareness-recognizing a feeling as it happens-is the keystone of emotional intelligence. An inability to

notice our true feelings leaves us at their mercy. People with greater certainty about their feelings are better pilots of their lives, having a sense of how they really feel about personal decisions.

2. *Managing emotions*. Handling feelings so they are appropriate is an ability that builds on self-awareness. People who are poor in this ability are constantly battling feelings of distress, while those who excel in it can bounce back far more quickly from life's setbacks.

3. *Motivating oneself*. Marshaling emotions in the service of a goal is essential for paying attention, for self-motivation and mastery and for creativity. Emotional self-control-delaying gratification and stifling impulses-underlies accomplishment of every sort. Getting into the "flow" state enables outstanding performance of all kinds. People who have this skill tend to be more highly productive and effective in whatever they undertake.

4. *Recognizing emotions in others*. Empathy, another ability that builds on self-awareness, is the fundamental "people skill". People who are empathetic are more attuned to the subtle social signals that indicate what others need or want.

5. *Handling relationships*. The art of relationships is, in large part, skill in managing emotions in others. These are the abilities that undergrid popularity, leadership and interpersonal effectiveness. People who excel in these skills do well on anything that requires interacting with others. They are social stars (Goleman, 1995, p. 43).

The key element of this emotional intelligence theory is self-awareness, a combination of the psychological terms metacognition (awareness of thought processes) and metamood (awareness of one's own emotions). Citing psychologist John Mayer, of the University of New Hampshire, Goleman defines self-awareness as being "aware of both our mood and thoughts about that mood" (Goleman, 1995, p. 47). Being self-aware means maintaining a neutral mode of self-reflectiveness in the heat of the moment. This ability is the most basic skill of emotional intelligence, and the one upon which all other aspects of the theory are based.

According to Goleman, lack of emotional intelligence or "emotional illiteracy" leads to anxiety, depression, social problems, attention and thinking problems as well as delinquent and aggressive behavior, all of which have increased in school children over the past fifteen years. There has also been an increase in violence, drop out rates, eating disorders and addiction. Teaching emotional intelligence, suggests Goleman, would be effective in prevention of these issues for some students. So-called wars on drugs and violence (among others) are merely crisis intervention after the problem has reached epidemic proportions. By teaching students the tools to understand and manage their emotions (such as self-awareness and impulse control), we give them the power to make more informed decisions about their behavior.

Goleman's claim that emotion pervades every aspect of intelligence, cognition and human interaction is based in part on the work of Joseph LeDoux, a neuroscientist at the Center for Neural Science at New York University. LeDoux found that the amygdala, an almond-shaped cluster of interconnected structures perched above the brainstem, is the key to emotion. When this structure is damaged or removed, the result is a loss of passion and emotion, but not cognitive processing skills. He further discovered that sensory input travels two different routes to the neocortex, where cognition (recognition, perception, understanding, memory) takes place.

Signals travel in from the sensory channels (eyes, nose, tongue, ears, skin) to the thalamus where they are translated into the language of the brain. The thalamus then sends out two signals. The first travels to the neocortex where it is processed and from here signals are sent to the amygdala for emotional response. The second signal travels directly to the amygdala. This signal arrives faster and unprocessed; the sensory

information travels directly to the emotional response center. Emotional responses to sensory information can occur before cognition has taken place. The subsequent actions are a reaction to the emotion rather than a conscious decision to act in a given situation (Goleman, 1995)[1].

The system, it is theorized, evolved in the human brain as a survival mechanism, allowing the fight or flight response to be activated immediately, prior to cognitive processing of the stimulus. This circuitry explains how a person can become overcome with emotion and act in a fit of passion, only to regret it later and wonder what came over them. Goleman (1995) terms this an "emotional hijacking" and proposes that learning to use emotion intelligently can prevent it from happening.

Intense emotional experiences are imprinted on the amygdala, and subsequent benign stimuli can sometimes trigger an inappropriate physical response due to emotional memory (Goleman, 1995). For example, a mother stepped away from a frying bacon pan for only a moment to answer the phone. In that instant, her four-year old daughter reached up to touch the pan and sustained serious grease burns when it crashed down on top of her. Years later, the smell of bacon frying causes the mother's heart to pound, her chest to tighten and a knot of dread to build in her stomach. Her emotional response to sensory input precedes cognitive processing. Rewiring the amygdala requires effective emotional management, time and practice (Goleman, 1995).

The first domain of Goleman's Model of Emotional Intelligence (1995), *knowing one's emotions*, requires intense personal reflection. One must practice constant self-awareness, "in the sense of an ongoing attention to one's internal states. In this self-

[1] This is an oversimplified description of the cognitive process. It is described thusly to remain accessible to the reader and to myself.

reflective awareness the mind observes and investigates experience itself, including the emotions" (Goleman, 1996, p. 46). Self-awareness is an attention that, rather than getting swept away by turbulent emotions, maintains a neutral mode, hovering above and observing what is happening. Only by knowing what we are feeling can we consciously decide what to do about it.

Recognizing emotions as they occur is an imperative building block of emotional intelligence. The second domain is *managing emotion.* The goal is not emotional suppression, but balance. Emotion that is appropriate to the circumstances (Goleman, 1995). Someone cutting you off in traffic does not necessarily warrant screaming profanity, flailing limbs and a blaring horn. Although this may be the first response you envision, stepping back for a split second to think about it may change your mind. Your emotional reaction to endangerment is designed to keep you safe. He didn't hit you; you are safe. Freeway shootings and road rage are examples of mismanaged emotional responses.

Although appropriate response to emotion often involves controlling an excessive response, another type of emotional mismanagement is repression. Daniel Weinburger, a research at Case Western Reserve University in Illinois (as cited by Goleman, 1995) found that repressors: "have become so adept at buffering themselves against negative feelings…that they are not even aware of the negativity…while such people may seem calm and imperturbable, they can sometimes seethe with physiological upsets they are oblivious to" (Goleman, 1995, p. 75). A more apt term than "repressors", purports Goleman (1995) might be *unflappables.* Weinburger's research (as cited by Goleman, 1995) showed that while an unflappable subject may assert that she feels

perfectly calm when faced with a sentence in a completion task that begins: "He kicked his roommate in the stomach", her body still shows signs of anxiety such as a racing heart, sweating and climbing blood pressure. Goleman (1995) terms it an "upbeat denial", a "positive dissociation". It may be a successful strategy for emotional self-regulation, but unflappables must overcome repression to practice effective self-awareness, a formidable task.

Motivating oneself is the third aspect of Goleman's model (1995). This ability is scaffolded by successfully recognizing and managing emotion. It involves marshaling positive emotions, such as persistence, enthusiasm and zeal, in pursuit of a goal. World champion athletes, for example, practice for hours every single day. World-renowned creatives like Bach got up and practiced for hours every single day (Shekerjian, 1990). Also imperative to motivation is impulse control. Delaying gratification may be necessary to achieve greater rewards. Relaxing instead of practicing may offer satisfaction immediately, but in the long run, sustained motivation and concentration will produce better results.

Continued, intense focus on a task can lead to the state of "flow". Goleman (1995) describes flow as a state of self-forgetfulness; the surrounding world disappears and all attention is focused on the task at hand. It is marked by feelings of rapture, ecstasy or spontaneous joy and thus is intrinsically rewarding. Flow is found between boredom and anxiety; when the task challenges the skill of the individual slightly beyond her limits, but not so much that she feels anxiety (Csikszentmihalyi, 1990). In the flow state, a person performs at her peak, her responses perfectly attuned to meet the changing demands of the task. Emotional static is quelled, as are worries, doubts and frustrations.

Athletes know this state of as “the zone” (Goleman, 1995). It is a state of optimal experience (Csikszentmihalyi, 1990).

The fourth domain of Golemans’ Emotional Intelligence Model (1995) is *recognizing emotions in others*. This skill is also known as empathy. Practicing self-awareness can improve empathy, as recognizing emotions in oneself makes it easier to recognize them in others. The key to empathy is reading and interpreting nonverbal cues. A sarcastic “thanks” holds different meaning than a sincere “thank you”. A facial expression can reveal the true meaning behind the statement: “I’m fine”. People who are adept at empathy are often outgoing and well liked, excelling in many arenas such as personal relationships, management, sales and politics.

Handling relationships is the fifth and final domain of Goleman’s model (1995). This skill builds on all others. It is, in effect, managing emotion in others. Social intelligence requires self-awareness, effective personal emotional management, motivation and empathy. This domain is akin to Gardner’s interpersonal intelligence (1983). Those who are skilled at handling relationships are able to read nonverbal as well as verbal communication, perform social analysis and act appropriately in the situation. Those who excel at handling relationships are social stars (Goleman, 1995).

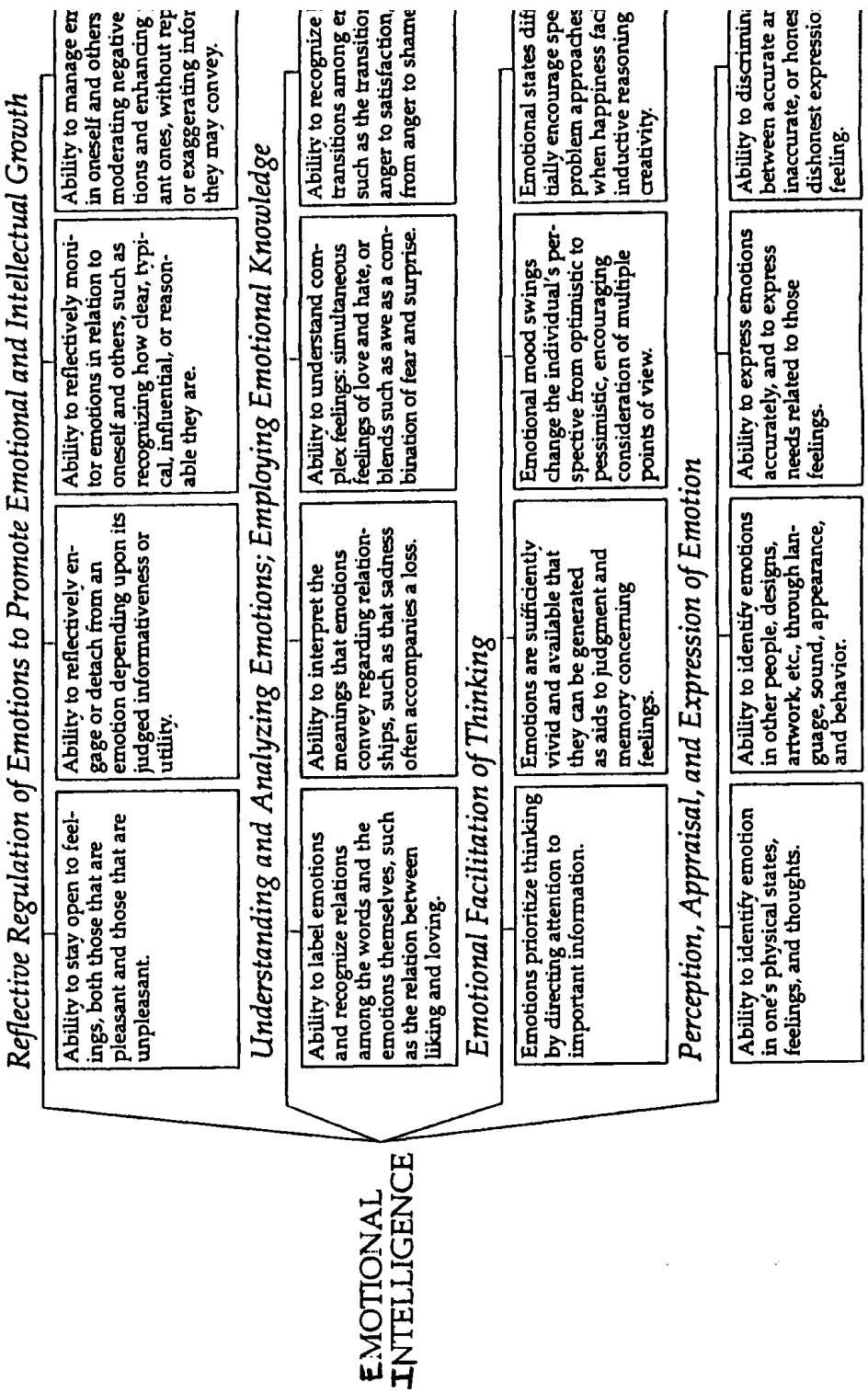
Emotional intelligence is the key to success and happiness in life, according to Daniel Goleman (1995). Any and all interaction with ourselves and with others depends on effective self-awareness and efficient emotional management. Because emotions are contagious and sometimes expressed nonverbally, it is imperative to monitor one’s own emotions those of others. Emotional intelligence can and should be taught in schools, according to Goleman (1995). By doing so, we would empower children to make more

informed choices and perhaps curb the depression epidemic that is wreaking havoc on our society.

APPENDIX C

THE FOUR BRANCH MODEL OF
EMOTIONAL INTELLIGENCE

FIGURE 1.1



(Mayer & Salovey, 1997, p. 11)

APPENDIX D

THE PROCESS OF CREATING

The Process of Creating

The process of reaching the goal, Fritz (1989) declares, develops along the way. Putting the process before the product cripples the ability to create. He outlines five steps in the process of creating anything:

1. Conceive of the result you want to create.
2. Know what currently exists.
3. Take action.
4. Learn the rhythms of the creative process.
5. Creating momentum.

Creating begins with conceptualization of the result you want to create. It may be a general concept, but it must be "clear enough that you would recognize the result if you had it" (Fritz, 1989, p. 124). As you play around with the concept, do not consider what is possible or how to achieve the result; instead focus on what you want to create. Through reflection, focus the general concept into a vision. A vision is a specific goal that becomes the organizing principle for the rest of the process.

Once you know what you want to create, you must assess current reality. This step of the process hinges on accurate observation. Allowing your own biases and

preconceived notions of where you really are to color your assessment results in observations that reinforce your own personal concept of reality. To avoid this, Fritz (1989) suggests beginning with the notion that you know nothing and building your understanding of reality through direct observations. Knowing where you are is a skill that helps identify a path to bring what you want into being.

The third step in Fritz's (1989) process of creating is taking action. A clear path is not necessary, as the path will twist and wind along the way. Each action you take will work or not work. By using the vision as a guide, the path to the goal, the process of creating the desired result, unfolds. Most actions won't work, says Fritz (1989), but a creator can evaluate and learn from the results of her own experiments. Over time, the creator learns which actions work best, but there is no formula for the creative process.

Learning the rhythms of the creative cycle is the fourth step in Fritz's (1989) model. There are three phases, each with its own unique source of energy, he purports. The first, germination is marked by enthusiasm, keen interest and a sense of power. This occurs at the conception of the idea and lasts through the development of the vision. Assimilation is second phase, during which internalization of the vision occurs. This phase generates momentum and is marked by insights, ideas and connections the creator makes as she takes inner and outer action to achieve her vision. Finally completion, the third phase of the creative cycle, includes bringing to fruition and learning to live with the creation. This phase is imperative and difficult for some to handle. It requires the ability to receive the fruits of labor. The energy from this phase helps move into the next germination (Fritz, 1989).

This final step of the process is creating momentum (Fritz, 1989). "Each new creation gives you added experience and knowledge of your own creative process. You will naturally increase you ability to envision what you want and your ability to bring those results into being" (Fritz, 1989, p. 55). The energy from each success or failure can lead to the next concept or germination phase. Each experience builds momentum for the next creation.

Emotion and the Process of Creating

We have no control over what emotions we are going to feel at any given moment. During the process of creating, successful creators experience emotions, according to Fritz (1989), but they "create what they create not in reaction to their emotions, but independent of them. Creators understand that emotions are not necessarily a sign of the circumstances" (p. 58). Through practicing self-awareness, the creator recognizes emotions as they occur and successful management strategies limit their influence on the creation. Intense focus on the task at hand and channeling enthusiasm as well as persistence can lead to detachment from oneself and the demands of everyday life, facilitating one's entrance into the state of "flow" (Goleman, 1995).