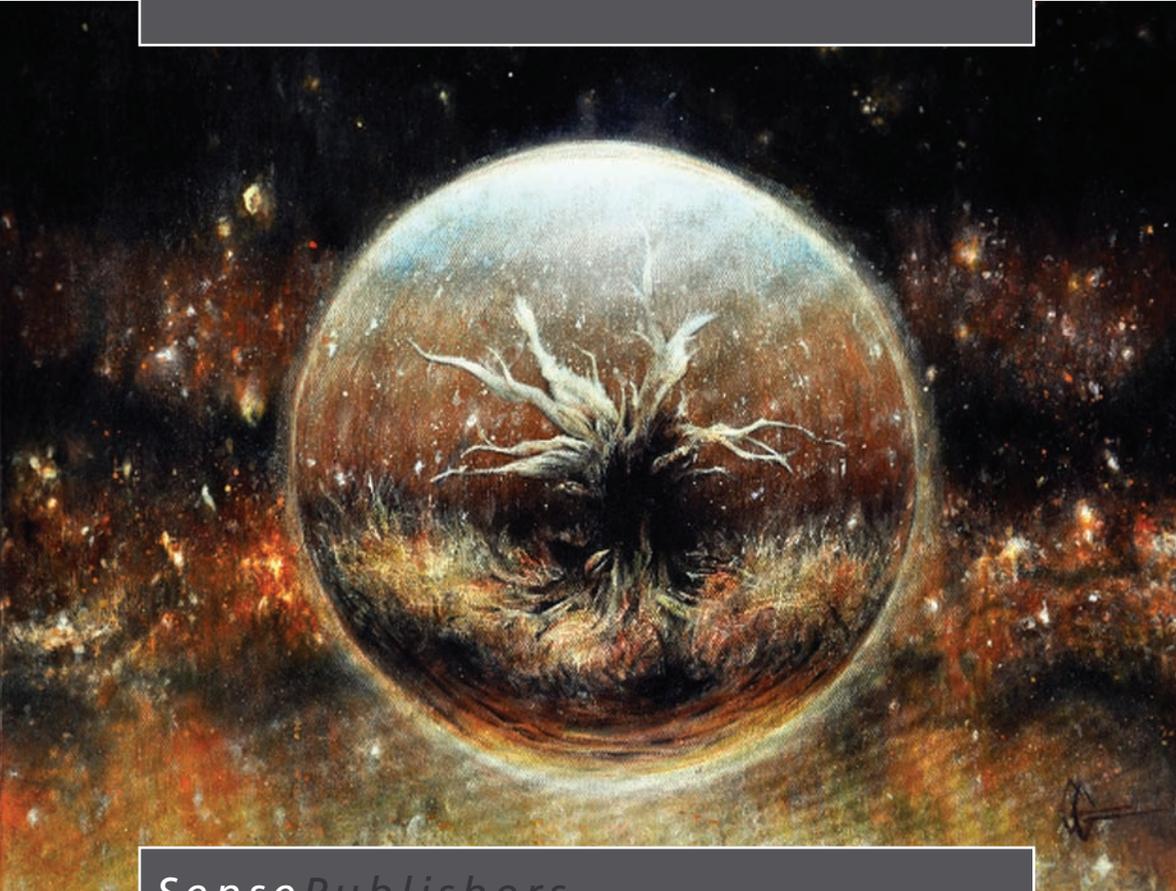


# Creativity for 21st Century Skills

How to Embed Creativity into  
the Curriculum

Jane Piirto



*SensePublishers*

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*How to Embed Creativity into the Curriculum*

Jane Piirto

*Ashland University, Ohio, USA*



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## **DEDICATION**

To Steven, Denise, and Danielle  
(of course)



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## PREFACE

I've been teaching since 1964, when I was a young mother and graduate assistant in the English department, while getting my first master's degree.

My take on creativity enhancement comes from a many-factored background that few who write in the education and psychology area have. I have been a teacher, an education and English professor, a school and college administrator for all levels, from pre-K through doctoral dissertations *and* I'm also a published and award-winning poet and novelist. That artist/education/ professor background has led me to some experiences and conclusions about the creative process that may be a little different from those you usually read about in books like this, and which have in turn led me to writing this book.<sup>1</sup>

In 1977, I was working on my first book-length scholarly tome, my dissertation, and the placement office called up and asked me whether I wanted a part-time job in the education of the gifted. I jumped at the chance to make some money, as my university doctoral fellowship had run out. For my interview, I went to the library and read up about gifted children. During the preparation for the interview, I looked at the federal categories of giftedness. These were (1) superior cognitive ability, (2) specific academic ability, (3) visual and performing arts ability, (4) psychomotor ability, and (5) *creative thinking ability*.

**Now this experience is where the dissonance that precipitated this book began.**

How are people "gifted" in "creative thinking," I asked myself? I understood about very smart people, people who were better at one school subject than another, people who were gifted at visual arts, theater, music, and dance, and people who were good at various individual sports, but creative thinking? I asked myself, "Aren't smart people creative? Aren't people good at academic subjects creative? Aren't visual and performing artists creative? Aren't athletes creative? Why is there a separate category for creativity? Aren't all children creative, unless they've been abused or something?"

Hold that thought.

### *The Dissonance Between My Creative Life and My Paying Job*

For extra money, while getting my Ph.D., I had applied and was accepted by the Ohio Arts Council to be a teaching artist as a Poet in the Schools in the National Endowment for the Arts "Artist in the Schools" program. My dual life as an artist and as an education scholar had begun, as I published my first creativity article, and my first article submitted to a scholarly journal, in the *Gifted Child Quarterly*, on incubation in the creative process, and later presented my first creativity study at a national conference, a survey of my fellow writers in the Artist in the Schools program about their lives and their creative processes. This was soon after I began my career in the education of the gifted and talented.

## PREFACE

Over the next thirteen years I was a county program administrator and coordinator in Ohio and Michigan, and the principal of New York City's Hunter College Elementary School, the oldest U. S. school for gifted children. I published scholarly articles and conducted small studies, all the while being active in writing and submitting literary work as well. This dual life, as both an artist and a teacher of teachers has given me a different view of creativity than that of most of the people who are experts in the psychology of creativity. I had an earlier master's degree in English, and another in guidance and counseling, but I was making my living in the K-12 schools as an administrator.

The field of the education of the gifted and talented has one of its focuses on creativity, on teaching for creativity, and on researching creativity. There is a Creativity division in the National Association for Gifted Children organization, and the special interest group for the American Educational Research Association is named Research on the Gifted, Creative, and Talented. After I began working in rural Ohio as one of the first coordinators of programs for the gifted in Ohio, I got myself trained in many of the current (and still ongoing—not much has changed since the 1970s) creativity training programs – Creative Problem-Solving, Future Problem-Solving, Odyssey of the Mind, Lateral Thinking. I began to think about my own creative process. I learned firsthand from California's Mary Meeker about the Structure of the Intellect<sup>2</sup>, and became one of her first advanced trainers, going around the country giving workshops on Guilford's theory of intellect, and on divergent production—fluency, flexibility, and elaboration, synthesis, and the like.<sup>3</sup>

Then I would go home and write my literary works, send them out for possible publication, and receive many rejections and enough acceptances to keep me going. My own creative life contained little of what I was learning about how to be creative in those workshops I attended, no matter how fun and how informative they were (and are)—little of brainstorming, SCAMPERing, generating of alternative solutions, creative thinking hats, or creative problem-solving, as described by the flow chart handouts I had been given.<sup>4</sup>

The creative process as described in educational and industrial psychology, was (and still is) fixed upon strategies I never used when I was doing my own creative work (nor did anyone else I knew—artists or educators). In fact, the creative process that business and education used was based on models that were designed for industry, and not for creators in other domains. Several companies have as their purpose to consult with industry to help business people be more creative. However, these strategies gained wide acceptance and practice in the educational world.

One technique widely taught is the Creative Problem Solving process, which is workshopped, taught, and researched at the Creative Education Foundation, which was founded in the early 1950s by advertising manager Alex Osborn, who published his famous book, *Applied Imagination*, in 1953, and who was a co-founder of the Institute after the book became a best-seller and he was able to leave advertising to focus on creativity education.<sup>5</sup> The Institute has conducted research on creativity testing and has published books by well-known educators and thinkers in creativity, giftedness, and spirituality. Their workshops are widely attended and they teach

creativity at schools all over the world. Thus, a model intended for business was intentionally and successfully modified for schools.

I believe one cannot teach people to be creative without having experienced the creative process in a transformational way. What I'm going to teach you in this book, I've taught to many adults, mostly educators, in several states and on several continents. I believe teachers who say "I am not creative," who haven't even tried to be creative, who are reluctant and shy about their own creative personalities, selves, and practices, will not be able to help their students to be creative.

If you'll take a look at the extensive reference list and the endnotes for this book, you'll see that I have given detailed examples about their creative processes from the lives of real creators in science, mathematics, invention, business, visual arts, creative writing, music, theater, and physical performance (dance and athletics). These are creators who have enough eminence to have biographical works, interviews, or articles about them and their lives. What I will talk about in this book, what I am teaching you here, is supported by biographical data, examples, anecdotes, and memories told by the creators themselves or recorded by their biographers. In other words, these strategies are research-based. I have varied the examples by domain, to make a comprehensive picture of the creative process.

Chapter One is a chapter on how creativity fits into education and psychology, and how the creative process requires a certain type of personality, motivation, and passion. This is the requisite theory chapter, often the most boring chapter in a book, but always necessary, to lay the groundwork for what ensues.

Chapter Two presents the Five Core Attitudes for Creativity. My organizational strategy is to present an overview of the concept, and examples of how creators practiced the concept. Then I give an example (or several) that one could use for teaching about it to a class or group, perhaps for staff development. Then I give an example of how an individual could practice this concept; then there are a series of suggestions for how teachers can embed the concept into the classroom curriculum, in atmosphere, setting, or subject matter. Each section ends with a blank page for you, the reader, to add your own ideas for using the concept being discussed. My purpose is not to exhaustively give example after example, but to point the teacher/reader in the direction of **application** of the concept.

Chapter Three talks about many kinds of inspiration. Inspiration is one of the Seven I's for Creativity. Chapter Four continues, with the other six I's for creativity, Intuition, Improvisation, Imagination, Imagery, Incubation, and Insight. Chapter Five demonstrates certain general practices for the creative process. Chapter Six talks about how to act creatively within an institution with an emphasis on situational factors that are necessary for creativity.

Each of the Five Core Attitudes, Seven I's, and General Practices for the Creative Process have suggestions for an individual, for a group, and ways teachers can emphasize them in their classrooms. For each there is a table of ways to embed the attitude, "I," or general practice. Many of these have been ideas shared in discussion and written down by real teachers who have been in a creativity group. These teachers were from all grades, pre-school through high school, and so the ideas vary, but they will give you a starting point for implementing these principles. The suggestions

## PREFACE

are organic and can be interwoven into the whole fabric of the classroom. Creative teachers may often use some or all of these strategies, There is no mystery to teaching creativity for 21<sup>st</sup> Century Skills, nor should you be afraid. You are already creative and so are your students.

Jane Piirto, 2011

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The cover of this book was painted by Grant Gilsdorf. It is called *Tree of Life*. The painting is owned by me, with permission to use it as a cover from the artist. Gilsdorf is an art teacher in the Olentangy, Ohio Liberty High School and is a former student of mine. I acknowledge its visual power here.

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## AUTHOR BIOGRAPHY



Jane Piirto is Trustees' Distinguished Professor at Ashland University in Ohio. She is an award-winning scholar in education and psychology, and a widely published and award-winning poet and novelist. Her doctorate is in educational leadership. She has worked with students pre-K to doctoral level as a teacher, administrator, and professor.

Her scholarly books are *Talented Children and Adults* (3 editions), *Understanding Those Who Create* (2 editions, 2nd edition Parents' Choice & Glyph Awards); *Understanding Creativity*; *Luovuus*; and *"My Teeming Brain": Understanding Creative Writers*. She has published many scholarly articles in peer-reviewed journals and anthologies.

Her literary books are *The Three-Week Trance Diet* (award-winning novel); *A Location in the Upper Peninsula* (collected poems, stories, essays) and *Saunas* (poems), as well as several poetry and creative nonfiction chapbooks. She has won Individual Artist Fellowships from the Ohio Arts Council in both poetry and fiction.

She is listed as both a poet and a writer in the Directory of American Poets and Writers.

She is a recipient of the Mensa Lifetime Achievement Award by the Mensa Education and Research Foundation, and of an honorary Doctor of Humane Letters degree by her undergraduate alma mater, Northern Michigan University. She was named an *Ohio Magazine* educator of distinction, and was awarded the Higher Education Award from the Ohio Association for Gifted Children. In 2010 she was named Distinguished Scholar by the National Association for Gifted Children.

She has given over 1,000 speeches, consultations, and workshops.



## CREATIVITY FOR 21<sup>ST</sup> CENTURY SKILLS

### *Personality, Motivation, Study, and Talent*

Currently, there is a call for 21<sup>st</sup> Century Skills, and these skills include creativity skills. This book will, perhaps help in that endeavor.

These 21<sup>st</sup> Century Skills include creativity and innovation skills within a comprehensive skills framework, as suggested by one of the 21<sup>st</sup> Century Skills think tanks. These are operationally defined, as follows.<sup>6</sup>

#### *Think Creatively*

1. Use a wide range of idea creation techniques (such as brainstorming)
2. Create new and worthwhile ideas (both incremental and radical concepts)
3. Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts

#### *Work Creatively with Others*

4. Develop, implement and communicate new ideas to others effectively
5. Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work
6. Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas
7. View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes

#### *Implement Innovations*

8. Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur

When people speak or think of creativity, they mistakenly think of it as having only to do with the visual arts and the other arts. Creativity cuts across all areas, and has to do with making new in all domains.

A few of the skills called for above (1, 3) focus on divergent thinking, a concept (that is over 60 years old), sometimes confused with creativity. Other skills (2, 4, 5, 6, 7, 8) focus on what I am going to write about in this book. Creativity is simply defined here, as “to make something new,” as a prerequisite to innovation.

Divergent thinking was part of the psychologist J. P. Guilford's *Structure of Intellect*. In 1950, Guilford, who was then President of the American Psychological Association, gave a speech that is often called the beginning of the modern interest in creativity as a measurable phenomenon. Guilford theorized that there are 120 kinds of measurable intelligence factored across five operations, four contents, and six products. One of the five operations was *divergent thinking*. His attempt to create a measurable phenomenon still challenges researchers, who often fail at defining creativity and thus fail to measure it.

J. P. Guilford differentiated between “convergent” thinking and “divergent” thinking. Convergent thinking emphasizes remembering what is known, being able to learn what exists, and being able to save that information in one's brain, being able to find the correct answer—i.e., converge. Divergent thinking emphasizes the revision of what is already known, of exploring what can be known, and of building new information—i.e. diverge. People who prefer the convergent mode of intellect supposedly tend to do what is expected of them, while those who prefer the divergent mode of intellect supposedly tend to take risks and to speculate.

Divergent production has often been confused with creativity. Here are Guilford's original factors that make up divergent production: “sensitivity to problems, ideational fluency, flexibility of set, ideational novelty, synthesizing ability, analyzing ability, reorganizing or redefining ability, span of ideational structure, and evaluating ability.”<sup>7</sup> He developed tests to measure each of these. Whole industries of exercise books, curricula, assessment systems, and suggestions have been based on the psychometrically measured Guilfordian “operation” of divergent production. I will include a short discussion and an exercise in divergent production in Chapter 4.

Creativity has been a topic of discussion and of research in the field of psychology for approximately sixty years. Psychology is the parent discipline of education, and education often takes its definitions from psychology. Psychology, the scientific study of mental operations and behavior, asks: What makes people creative? How can creativity be measured? How can creativity be enhanced? What can we learn from creative adults that will help us raise more creative children? Is creativity an aptitude? Is creativity ability? Is creativity a domain? Is creativity acquired? Is creativity innate? What happens in the mind while a person is creating? What are the conditions for creative production? What inhibits creative production? What does the social setting contribute to creativity? Is creativity a solitary or community activity? All these, and more, are questions psychologists have sought to study with regard to creativity. Creativity research usually follows four streams, called the “4 P's”: Process, Product, Person, and Press (meaning environmental influence).

Educators nowadays are focusing on a set of recommendations called 21<sup>st</sup> century skills, and among these are creativity skills. Perhaps it's time to join the 21<sup>st</sup> century, and to add to the divergent production exercises that flood the creativity enhancement market in education, and move into a new set of skills that take into account the *whole* person, the *whole* teacher, the “interior teacher,” as popular educator Parker Palmer called it.<sup>8</sup> This book will add to the literature on the interior lives of teachers, with an emphasis on new sets of skills. See Table 1.1.

Table 1.1. How 21<sup>st</sup> century skills and Piirto's creativity system relate

21 <sup>ST</sup> CENTURY CREATIVITY SKILLS		PIIRTO'S CREATIVITY SYSTEM	
<b>Think Creatively</b>			
1.	Use a wide range of idea creation techniques (such as brainstorming)	–	Core Attitudes (Openness to Experience, Risk-Taking, Tolerance for Ambiguity) I's (Inspiration, Intuition Insight, Imagination, Imagery, Incubation, )
2.	Create new and worthwhile ideas (both incremental and radical concepts)	–	General Aspects (Exercise) Core Attitudes (Openness to Experience, Risk-Taking, Tolerance for Ambiguity, Self-Discipline, Group Trust) Seven I's
3.	Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts	–	General Aspects Core Attitudes (Openness to Experience, Risk-Taking, Tolerance for Ambiguity. I's (Incubation, Intuition) General Aspects
<b>Work Creatively with Others</b>			
4.	Develop, implement and communicate new ideas to others effectively	–	Core Attitudes (Openness to Experience, Risk-Taking, Tolerance for Ambiguity, Group Trust) I's (Imagination, Imagery, Improvisation, General Aspects
5.	Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work	–	Core Attitudes (Group Trust)
6.	Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas	–	Core Attitudes (Tolerance for Ambiguity; Self-Discipline; Group Trust) I's (Intuition Inspiration, Incubation) General Aspects (Creativity as the Process of a Life)
7.	View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes	–	Core Attitudes (Openness to Experience, Risk-Taking, Tolerance for Ambiguity, Self-Discipline) General Aspects (Creativity as the Process of a Life)
<b>Implement Innovations</b>			
8.	Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur	–	Core Attitudes (Tolerance for Ambiguity Self-Discipline; Group Trust) I's (Intuition Inspiration Incubation) General Practices (Creativity as the Process of a Life)

Successful creators in domains have similar patterns of education and familial influence, depending on the *domain* in which the creativity is practiced.<sup>9</sup> I have studied persons by domain of creativity rather than by general creativity aptitude, with a view to how their life paths can inform the creative process.<sup>10</sup> That is, most of my research has been on the Person and Press, with very little emphasis on the Product. Each domain has its own rules of accomplishment and paths to achievement. However, as I was reading biographies, interviews, and memoirs and plotting life

paths and thinking about the environmental suns, as delineated in my model, The Piirto Pyramid (see Appendix), I inevitably came upon the creative process as practiced by creators. I noticed that no matter what a creator creates, the creative process is remarkably similar. There are commonalities across domains.

Most creative adults in the domains of visual arts, literature, science, mathematics, music, acting, athletics, invention, entrepreneurship, and dance talked about their creative process in what could be called holistic, or organic terms, rather than in step-by-step linear progressions.<sup>11</sup>

Cognitive psychologists disparage such accounts, which they call anecdotal and retrospective, and therefore untrustworthy, saying that you can't trust what people say about their own creative processes, because how can they know what's really happening inside.<sup>12</sup> Such disparaging of the biographical is a common practice for scientifically oriented psychologists who distrust any findings that are not made with double-blind experiments. But my literary background, which dwelt on the *poetic way of knowing* that embraces the psychoanalytic and the depth psychological viewpoints of Freud, Jung, and Hillman,<sup>13</sup> caused me to doubt the psychologically scientific and to search for the experiential, the affective, and the artistic in these biographical descriptions.

As I studied the creative processes of creators, I found no mention of the words creative problem-solving, fluency, flexibility, brainstorming, or elaboration in the essays, memoirs, biographies, and interviews of creators in various domains. The creative process as practiced by creative productive adults has engaged thinkers of the world from prehistoric times, but none of them has described the creative process in the way that it has been taught in schools for the past fifty years. For example, mythological and classical perspectives on the creative process have viewed inspiration as the visitation of the Muse,<sup>14</sup> which is the inspiration of desire, or of love, but a discussion of love is often confused with a discussion of sex, and the schools step back from such discussions.

Historically, the creative process has also been tied with desire for spiritual unity, and when people describe their creative process, they often get dreamy and intense. Schools focus on the concrete, and any venture into the mystical or spiritual is often confused with the teaching of religion, which is banned in public schools. The creative process is also tied with the desire for personal expression. People who create also express their autobiographical experiences, their coded stories, their past traumas, their obsessions, and their passions. While the personal is often evoked in school in the form of journals or essays, the most value is placed on the expository, the impersonal, and the evaluative.

The concept of two sides of the brain, the right side for creativity and the left side for plodding intellect, is part of overly simplistic contemporary understanding of creativity. (Indeed, we need the whole brain for creative production.)<sup>15</sup> What is popularly called "right-brain thinking," is often considered flakey and not trustworthy, and, therefore, "creative," in quotation marks, is often a put-down.

Those who are creative seem to follow certain common practices. Even the most recent biographical accounts describe experiences similar to those of yore. Creators in the sixteenth century accessed practices remarkably similar to creators in the

twenty-first century, yet these practices are glossed over in the creativity books that fill the book stalls at exhibit halls at education conferences. In the domain of education, we rely upon psychology to lead us, and the psychologists, especially the educational psychologists, seem to be still in Guilford's cognitive (mind) view. Remember, he called his theory the Structure of the *Intellect*. Another multi-factored theorist in psychology, Howard Gardner, has called his eight types of intelligences, frames of *mind*, and each of his books has the word "mind" in the title. The body and the heart are minimized in these theories (though two of Gardner's intelligences are the interpersonal and the kinesthetic).

**The repertoires of many of those who teach people to be creative, who often use only strategies based on Guilford's cognitive aspect of divergent production in enhancing creativity, should be expanded.**

Many of the creative and productive adults whose lives are worthy of scholarly biographies seemed to have creative processes that could be divided into three themes, with several subthemes. (1) They seemed to have certain core attitudes toward creativity; (2) they experienced what I came to call the Seven I's (Inspiration, Insight, Intuition, Incubation, Improvisation, Imagery, Imagination) (3) they engaged in *certain* general practices: a need for solitude and for rituals; they had formally studied their domains; they liked meditative practices; they were part of a community of people working in the same domain; their creativity was part of a lifestyle, a lifelong process.

I have collapsed these into what I call the *Five Core Attitudes for Creativity*, the *Seven I's for Creativity*, and the *General Practices for Creativity*, and I began to translate these concepts into lessons. Not all creators use all of these techniques, but many creators use at least some of the techniques. Why can't people who want to be more creative, and people who teach people to be more creative, try to duplicate, or imitate what the creative producers of works of art, science, invention, and music, say they do while they create?

By now, I have assembled many activities that tap into the mysterious, nebulous, dreamy, solitary, quietness of the creative process as it has been written about and talked about by adult creators. I have asked my teacher students in creativity classes to try these activities, and to translate the principles upon which the activities are based, into activities that would be able to be used by the children and adolescents they teach.<sup>16</sup>

Over the years, a thousand or so of my undergraduate and graduate students have completed biographical studies that illuminate the themes in creators' lives, and how they create. Students are to analyze the life path and creative process of the creator according to the theoretical framework of my Pyramid of Talent Development. (See Appendix A for an explanation of the Piiroto Pyramid of Talent Development.) Results show that the patterns in creative lives that I have delineated in my two books, *Talented Children and Adults*, and *Understanding Creativity*, seem to hold up.

I have presented these ideas about the creative process in real creators to thousands of people at psychology and education conferences and at workshops. While my work has been with teachers and college students, and not with business

people, the other great consumers of materials on creativity, perhaps what is here described can be extrapolated.

*The Thorn Of Creativity Is Necessary*

On my Pyramid of Talent Development there is a thorn. The thorn compels the person to create. Often, the creative person decides to pursue the development of his or her creative talent after some catalyst reveals that this is what must happen. It may be winning a contest or receiving praise or becoming so pleasantly engrossed in the making that is creating that the person realizes that this is what he or she must do come hell or high water. It may be a depression that is assuaged by making or creating, so much so that the self-healing that happens when one is creative warns the person that he or she must create in order to prevent illness. It may come after a long period of thought and meditation. The creative person recognizes that the thorn is pricking and the call must be answered. Here is a drawing one of my group members made to illustrate a quotation about the thorn of creative passion; one cannot not do what it pricks at.

Jung described the creative person, the “poet” (by this he was Platonic and Aristotelian, using the term “poet” to indicate all those who create) and his or her “art” (by this he meant *poesis*, the work the creative person does) thus: “Art is a kind of innate drive that seizes a human being and makes him its instrument. The artist is not a person endowed with free will who seeks his own ends, but one

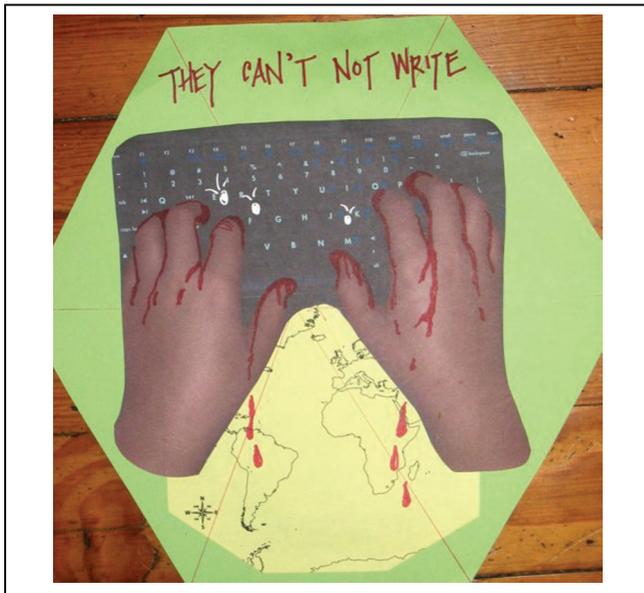


Figure 1. “They Can’t Not Write“.

who allows art to realize its purpose through him.”<sup>17</sup> Jung commented that the lives of such creators are often unsatisfactory on the personal level because “a person must pay dearly for the divine gift of the creative fire.”

Carl Jung believed that people are bestowed with certain talents when they are born—he called this “energy.” Because this energy is so all-powerful, creators may exhibit “ruthlessness, selfishness, and vanity” (he commented on the narcissistic personalities of creators), but this could be excused because of the calling, which, from birth, pursues the creator to interpret the world by being subordinate to his talent.

The poet (creator) gives his or her talent form in the domain in which he or she works. Thus the “great work of art is like a dream” that “does not explain itself and is never unequivocal.”<sup>18</sup> The dream portrays an image, and this image is reflective of what Jungians call the objective psyche or collective unconscious, something bigger than the person him- or herself, a representation, an interpretation, of what exists in the spiritual nature of the society. The life of the creator does not explain the work, interesting though the life may be. The work itself is its own explanation.

So, let us consider then our paradoxical image of a thorn. Immediately we picture the thorn on a stem. The stem is essential to the thorn, for the thorn cannot exist without the nourishment from the stem rooted in the earth, within the ecosystem, the planet, the cosmos. Raising our focus upward, we see the thorn protects the stem, upon which grows the rose. All are part of the image of the thorn. The rose is contained in the thorn and the thorn protects the rose. The rose is the symbol, or the image, of multitudinous meanings, many sentimental, many intertwined with religion, royalty, and mystery. Whatever the image is, the rose can become—the thorn, which can prick, stab, or loosen the flesh which tries to capture it, to hold it, protects it. Conversely, where lives are loosened and pierced, be it traumatic, ecstatic, or both, the thorn calls attention to a deeply rooted unfolding, blossoming, always more.

Musician Quincy Jones is an example. At age eleven, he broke into a warehouse and found a piano. “I touched that piano and every cell in my body said this is what you will do for the rest of your life,” he said. He would revisit that piano to learn songs he’d heard his neighbor Lucy play. He began composing music before he knew what a key signature was. When he heard a local barber playing the trumpet, he was hooked on playing it also, but he tried everything from violin to the sousaphone before he finally got his hands on a trumpet.<sup>19</sup> He said, “that when he got a trumpet, “the love, this passion came forth, and that’s when somebody lit a flame, a candle inside, and that candle still burns, you know, it never went out. I’d stay up all night sometimes until my eyes bled to write the music.”

#### MOTIVATION TO CREATE: PASSION FOR WORK IN A DOMAIN

Motivation to create has to do with The Thorn. The main cause for creativity is that the creative person *wants* to be creative, in whatever domain he or she is working – whether it be woodworking in the basement, dancing, acting, drawing, singing, doing science, mathematics, inventing, being an entrepreneur, being an athlete, cooking,

sewing, building, designing. People who are creative must have motivation.<sup>20</sup> Creators *intend* to be creative, to make—something. People have to *want* to be creative. Creativity takes a long time and a certain amount of obsession. Motivation is the only and main personality attribute that all creative people have and need.<sup>21</sup> The creator prepares by study and mental readiness. Creative people want and need to make things in their domains of interest. They also possess the talent necessary to create in their domains, and they have had the environmental influence necessary. These environmental influences include beginning family influences.

We can extrapolate from psychological work on reward. What are the rewards for being creative? Fame is not usually one of them. Musician Mat Callahan said, “I have never found any correlation between money and the effectiveness of the creative process and its results.” He went on: “Do I produce a demand for my creative work ... do I produce marketable commodities? Maybe. Do I apply my energies to my creative work, regardless? Certainly. Continuously. Why? Because of the satisfaction I derive from the process itself and the pleasure it brings to others.”<sup>22</sup>

The most enriching rewards for creative endeavor are intrinsic; that is, the reward is in the pleasure the creator takes in doing the work itself, and in achieving the result, and not from the pay or the prize. Even painters who don’t have galleries, musicians who don’t have audiences, writers who aren’t published, actors who act in community theater, dancers who dance alone, scientists and mathematicians who spread the table with arcane formulas to solve personally challenging problems, do not stop doing. While some may say that creative people need a killer instinct, and need to be so driven that they would do anything for fame, recognition, or validation, continued creative production derives from less cruel motives. The work itself is intrinsically interesting.

Often, the thorn, the passion that wounds, also saves. The obsession that is ingrained in the image can serve to rescue someone who is lost. Musician Eric Clapton suffered from heroin addiction and from alcoholism. His girlfriend indulged in drugs and alcohol with him. After two stints in rehab, Clapton was able to quit, and has remained sober for over twenty years. He said that it was his desire to play and create music that saved him. His girlfriend was not so fortunate, for she had no passion for creating. She died after many relapses, saying that she had nothing else but the addiction, and that she was unable to give it up.<sup>23</sup>

Thus, the creative process is not merely as described or practiced by the educational and psychology experts. It is more complex. Often the creative process is similar to a spiritual or a transformational practice in creators. Some have said that God draws people to himself through creativity.<sup>24</sup> Creators are often apt to closely guard the mysteries of the creative process, and to treat the creative process ritualistically.

Personal transformation is often necessary so the person who wants to create will slough off the reasons not to create. You can’t teach students to be creative unless you have tried out your own creative impulses. And everyone is creative, and has creative impulses. Often, placing yourself into proximity to other creators, and practicing a process whether or not you believe it will work, is enough to make it work. Lassitude, laziness, inertia—all operate in preventing us from creating.

Rejection, indifference, and criticism from others also thwart creativity. Fear of creating also has a place in obstructing the creative process. Many of my students are female teachers who have such busy lives as mothers, wives, and professionals, that they have forgotten who they are, essentially, who they were before they led lives of sacrifice for love, and they often experience a deep feeling of coming home during the creativity class.

DO YOU HAVE THE PERSONALITY TO BE CREATIVE?

Certain personality characteristics are common in creators, as you can see on the base of the Piirto Pyramid.<sup>25</sup>

Which of these do you have? Look at the following list. Think about a time in your life when you showed this personality characteristic and tell a story about that time. This may take some time, but it may be fun for you to recall your own past personality-driven experiences and acts. In a class, perhaps a few minutes at the beginning or during each or several class periods can be given to doing this.

Table 1.2. My personality attributes

MY PERSONALITY ATTRIBUTES	MY STORY: WHEN I SHOWED THIS ATTRIBUTE
Androgyny—a balance of masculinity and femininity	
Imagination	
Introversion	
Intuition	
Independence	
Naiveté, Or Openness To Experience,	
Conscientiousness	
Creativity	
Perceptiveness	
Persistence	
Preference For Complexity	
Resilience	
Risk-taking	
Self-discipline	
Perfectionism (self)	
Tolerance For Ambiguity	
Motivation to Create	
Intensity (overexcitability in intellect, emotion, imagination, sensation, or physicality) <sup>26</sup>	

If you are curious about which personality attributes you prefer, take an online personality test or two. The one I most often work with is the Myers-Briggs Type Indicator, which was one of the tests developed when they began researching the personalities of creative adults in Berkeley, California in the early 1950s.<sup>27</sup> The Myers-Briggs Type Indicator also has a creativity scale. The research on the creative personality has gone on for over 50 years, and the early findings still hold true. As Frank Barron, one of the primary researchers said in 1968, “Three distinct traits characterize creative people: (a) they discern more complexity than others, (b) they possess more perceptual openness and resist premature judgmental closure, and they depend on intuition and hunches to a great degree. Finally, creative people seem motivated to create since they often expend a great amount of energy on their productions.”<sup>28</sup>

If you don’t think you show these personality characteristics, don’t despair. None of this is set in stone. The major point here is that you have the thorn and you have the motivation.

#### DO YOU KNOW THE DOMAIN?

Besides the thorn and the motivation, you have to know what you’re doing. This will entail study, if you want to get serious about the creativity. Knowledge of the domain in which a person wants to work is absolutely necessary. In teaching, people take classes in how to teach, and in classroom management. The people who observe a teacher managing a class don’t even know he or she is managing, the class procedures are so seamless. This is knowing the domain. Pulitzer prize-winning composer John Adams said,

There’s no substitute for having plain, awesome musical chops: having a great ear, being able to perform well on an instrument, and having a huge, encyclopedic knowledge of music. Composers should know everything. Nowadays there’s no excuse for not being at least aurally familiar with medieval music and Renaissance music, and they should know jazz and pop music, too. It’s all possible to do.<sup>29</sup>

The formal study that is necessary to create within a domain cannot be short-circuited. Expertise is necessary. The rule of thumb is called The Ten Year Rule; that is, one should have studied a domain for about ten years before one can make an original contribution. They also say that you should do 10,000 repetitions.<sup>30</sup> This varies by domain of creativity, but the point is that if you are interested in doing something, you should study it, preferably in a formal way. You’re not going to invent a new car design without studying car design and know what has been done before, what didn’t work, what worked, and where the car design field can be pushed.

In studies I did of published and award-winning creative writers, I found that almost all of them majored in literature as undergraduates, before they turned to creative writing as a profession. They had read literature and studied it before they were accepted as writing it.<sup>31</sup>

Many people say, “I am not creative, never have been, never will be.” Others say, “I wish I were more creative but don’t know how to be.” In my practice as a professor who teaches teachers, I have often heard both of these statements. Teachers

are urged to teach their students to be creative, but the teachers themselves are often reluctant, fearful, and uneducated in how to do so. My belief is that the teachers must themselves be transformed in order to teach their students to be creative.

The following pages will, I hope, lead to your, the reader's own "aha!" and contribute to your own transformation into being a more creative person than you have been in the past. I will discuss each of the Five Core Attitudes, Seven I's, and General Practices, giving examples from the lives of eminent creators, and giving examples of exercises you can try either with a group or by yourself.

As a teacher I ask myself one question each time I plan a lesson. How can I help my students take the concept I am teaching about into their own physical reality? If we do not do it physically, with our senses, we are likely to not take it in completely. (That is the reason we remember our gym classes more than our math classes.) How can I as a teacher create a lesson that will make an image? How can I make the concept concrete? "What is the image?" is my teaching motto. Every time I am teaching something and every time I am writing something, I try to create the image or the experience so that my students and my listeners can create the image. So far it has seemed to work.

What is personal transformation, after all? Many writers on the topic use the image of the caterpillar transforming into a butterfly.<sup>32</sup> I think that is a little cliché and corny, but the image, being a standard science lesson for kindergartners, whose teachers show them chrysalises from which butterflies emerge, has the advantage that everyone will get it. Personal transformation means that a person will become more intensely and wholly who she is and has always potentially been. In the process, the person experiences a sense of recognition through the revelation provided by the images that have been created. The truth emerges and the person feels more wholly her ideal self. This is an inner process in which the person blooms forth in becoming what is possible. The person then, in turn, may sway others to experience their own creative transformations.

I am not a therapist, nor do I claim to have discovered the meaning of life, nor do I claim to be a healer or a leader to anyone but my students, and that always ends when the semester ends, and so I urge you to seek your own transformative images through some of the following practices.

#### SUMMARY OF KEY POINTS

1. The 21<sup>st</sup> Century Skills movement has stated that creativity is important.
2. Many of the creativity skills currently taught are based on a theory of divergent production that is over 60 years old.
3. New skills should be based on what real creators do while they create.
4. The guiding framework for this book comes from the author's model/image of a pyramid and suns.
5. Personality attributes, cognitive ability, talent, environmental factors, motivation, and knowledge of the field are necessary in developing one's creativity.
6. Creativity enhancement is often a transformative process for the individual.

## CHAPTER 1

### **MY THOUGHTS AND INSIGHTS ON THE IDEAS IN THIS CHAPTER**

#### Possibilities:

- Fill out your own Pyramid of Talent Development, based on the figure in Appendix A.
- What is your “thorn”?
- Discuss your motivation for creating.
- Discuss your training, study, and development in a domain.
- Make an image (drawing, creative writing, music, photography, dance, diagram, etc.) of some idea in this chapter.

## CHAPTER 2

### FIVE CORE ATTITUDES

This chapter will discuss the five core attitudes creative people seem to possess: (1) Core attitude of Self-discipline about doing the creative work, which includes the presence of motivation; (2) core attitude of Naiveté, or openness to experience; (3) core attitude of Risk-taking; (4) core attitude of Tolerance for Ambiguity; (5) core attitude of Group Trust.

One of the most common practices among all creators is the fact that they make notes to themselves of ideas that occur to them. The notes are written in personal code. In order to begin to practice the five core attitudes, buy a sketchbook from the local drugstore. It should be small enough to be mobile, to be put into a purse, pocket, or briefcase. Alternately, always make sure to have a stub of pencil and a scrap of paper, to make notes and marks. So. Begin. Take yourself and your ideas seriously. *Dot your thoughts*. The notes and marks are just that, messages to yourself, not to be interpreted by anyone else but you, the maker of the marks. I call this a Thoughtlog because the content is thoughts. No one else has to be able to understand it.

#### CORE ATTITUDE OF SELF-DISCIPLINE

When one studies the lives of creators, one often finds they have created many, many works, even though they may be only known for one, two, or a few. This production of multiples takes self-discipline, and the self-discipline leads to the great productivity of creators. Expertise research says that one cannot contribute anything new to a domain unless one has been working in the domain for at least ten years.<sup>33</sup> Expertise is acquired after one has done 10,000 or more repetitions, which is called *deliberate practice*. As a result of this exposure to the domain, an expert can recognize what's wrong instantaneously, and move to fix it. Experts in a domain have developed their long-term memories, and can retrieve information that is pertinent to the problem at hand, and immediately, or with some thought, figure out what needs to be done.

The expertise research downplays the existence of domain talent as well as creativity ability as too nebulous, too un-quantifiable, too abstract, and seeks to extrapolate how people acquire the skills to make what they will make. Expertise is acquired by focusing on certain skills polished by deliberate practice, and the question that is often asked is whether deliberate practice can account for differences between those who are considered "more talented" and those who are considered "less talented." The expertise people do not doubt that innate differences exist, but they are seeking to find out whether these differences account for the ultimate levels of accomplishment certain individuals can achieve.

The creator has acquired *automaticity*, the ability to do the task without thinking. Picture the piano student, practicing scales for hours, logging constant and continuous days and months in the practice room. Picture the athlete, doing drills for hours, logging constant and continuous days and months on the practice court.

Picture the writer, sitting alone at the desk, writing poems and stories and novels, with only a few published. Picture the teacher, glancing at student papers and immediately being able to figure out how it can be improved, and what needs to be done when the student revises. Picture the aged visual artist Willem de Kooning, who, even after he had achieved fame and notoriety, would spend hours drawing portraits of the people he saw on television.<sup>34</sup> All of these creators have acquired expertise.

### *Examples from Creators of the Core Attitude of Self-Discipline*

Van Gogh wrote to his brother Theo, an art dealer, “I am daily working on drawing figures. I shall make a hundred of them before I paint them.”<sup>35</sup> Visual artist Josef Albers said, “In science one plus one is two, but in art it can be three. Often I have to paint a picture ten different times before I reach a realization. I usually start with a small sketch, then comes painting after painting until I realize what I’m after.”<sup>36</sup>

Choreographer Agnes de Mille noted that “all artists—indeed all great careerists—submit themselves, as well as their friends, to lifelong, relentless discipline, largely self-imposed and never for any reason relinquished.”<sup>37</sup> Most well known creators are known for only a few of their voluminous numbers of creative works, produced through great self-discipline over a period of years.

Composer William Bolcom said, “For a big piece, I pull together a big morgue of sketches — little notations, jottings that will remind me of how a particular passage might go. When there are enough of these things, I’m ready to write. That’s exactly what happened with the *Songs of Innocence* and of *Experience*. Suddenly I realized that I was ready to start, I was ready to get the thing done, after sketching, working on bits and pieces, for quite a number of years.”<sup>38</sup>

### *Exercise for a Group or for Staff Development*

In creativity group, group members use their Thoughtlogs to signify the importance of repetitive practice. The Thoughtlogs are solitary creative practice, as well as practice in the core attitude of self-discipline. The group members must make marks for 10 minutes a day. “Making marks” means anything—not only writing. Sometimes, literally, the page for the day has consisted of one pencil slash. These are not judged nor commented upon; e.g., this is not a dialogue between teacher and student as journals often are, but an attempt to imitate the creative practice of creators; who all make marks about their products; they do not hold them in their heads and produce them full-blown, as Venus rises from the sea.

To form a habit takes about 21 days to 2 months, according to popular internet sources. This requirement has had various results; one student used the sketches in her Thoughtlog for her senior art show; others have not continued the practice, but have looked back on the 15 weeks of creativity group and find there a portrait of

their lives at that time. They did not take the “habit” of creative thinking to its regular deliberate practice, because they were not motivated to do so.

### *Exercise to Do Alone*

Practice. You want to become an actor, a dancer, an athlete, a scientist, a mathematician, a musician, a creative writer, a visual artist? A teacher? Practice. One of the funniest examples (in a sad way) of a teacher acquiring expertise is in the movie *Chalk*, where the history teacher learns, through the course of his first year, how complicated is the art of teaching.<sup>39</sup>

People often ask me how I can get so much writing done. I tell them my great secret. Every day I put my seat on the chair. Every day. I work on what project is at the forefront, and I am always working on several projects at once. One day I work on an article that needs revising; one day I work on a poem from my Thoughtlog; one day I work on an essay; one day I work on this book; one day I work on a literature review for a study that we are doing. But every day I write, and I have done this for more than the ten years requisite for experts. It adds up.

Can a person be creative without a product? If you ask someone, “Are you creative?” and the person answers, “Yes,” the next question is “what are you creative at?” The person has to give an example, or several, to illustrate. Thus the creator creates, within a domain of practice. So. Choose a domain. Something you have always wanted to do. Your “thorn.” Now. Practice. When you get as old as I am, you will have drawers full, file cabinets full, of work you have practiced.

### *Ways Teachers Can Embed the Core Attitude of Self-Discipline*

Here are some ways that teachers can embed the core attitude of self-discipline in their students.

*Table 2.1. Ways teachers can embed the core attitude of self-discipline*

#### **Ways Teachers can Embed the Core Attitude of Self-Discipline**

- Discuss self-discipline with the students and ask for their own hints and keys to self-discipline in work, diet, exercise, and various activities they want to master.
- Discuss long-term goal setting and short-term goal setting.
- Do a visualization where students project themselves into the future, see themselves where they will be in a month, a year, five years.
- Show and discuss examples of how people achieved goals.
- Break down long-term assignments into small steps, and monitor the steps with a chart, a list, and a personal high-five. Give students a calendar so that they can check off that they have completed the steps.

## CHAPTER 2

- Discuss frequent excuses that people make not to achieve their goals.
  1. What’s the point of all this?
  2. Why bother?
  3. I’m not good enough. I don’t have what it takes.
  4. Let’s do it later.
  5. I’ll do it later. I’m going to do something else before I do it.<sup>40</sup>
- Have the students create a schedule for when they will do their work.
- Emphasize the importance of being on time for appointments. (If you don’t show up, for the rehearsal, you can’t practice.)
- Treat work as practice, not as a final product.
- Value hard work—emphasize the process, not the product.

**MY THOUGHTS AND INSIGHTS ON THE CORE ATTITUDE  
OF SELF-DISCIPLINE**

Possibilities:

- Discuss how practice made for automaticity in the expertise you have acquired.
- How does self-discipline figure into your own creative life?
- Make an image (drawing, creative writing, music, photography, dance, diagram, skit, etc.) of this core attitude.

## CORE ATTITUDE OF OPENNESS TO EXPERIENCE

Naïveté here means openness to experience, one of the Big Five Personality Attributes. An attitude openness to experience as a core attitude refers to the fact that creative people pay attention to the small things, and they are able to view their fields and domains by seeing the old as if it were new. They are able to view things as if never seen before, and therefore, they are able to pierce beneath the surface, and to make creative works that open up the field in ways that have never before been done. “Why didn’t I think of that?” is often the reaction of other people in the domain. “I could have done that,” is another reaction, but of course, without knowledge of the domain, they couldn’t. This core attitude implies that the person perceiving has such familiarity with the domain, that the work can be done with skill and knowledge.

### *Examples from Creators of Openness to Experience/Naïveté*

Examples abound in every domain of creativity. The invention of Velcro came from noticing burrs in the woods. Inventor Georges Mestral teamed with a weaver to create the fastener. Levi Strauss was selling canvas when miners told him they needed pants. When he made pants out of canvas, the miners told him they chafed. He substituted a fabric called serge de Nimes, which was shortened to denim. His knowledge of fabrics was essential to his naïveté.

Creators focus on the smallest details and probe what is beneath the surface. The photographer Robert Mapplethorpe and the artist Georgia O’Keeffe exposed the inner, erotic parts, of flowers, and people began to see flowers differently. The attitude is an attitude of acceptance and curiosity about the odd and strange.

The attitude of openness to experience includes the ability to notice and to remark differences in details. The artists Arshile Gorky and Willem de Kooning used to walk the streets of New York at night, pointing out the reflections of the few neon lights in paper thrown on the streets, remarking on the shapes and shadows, seeing the obvious as if new.<sup>41</sup> Composer Igor Stravinsky called this openness “the gift of observation.” He said, “The true creator may be recognized by his ability always to find about him, in the commonest and humblest thing, items worthy of note.”<sup>42</sup>

Poet Jane Hirshfield spoke of the source of the literary imagination as being perpetually perched on the edge, or in the margins. A certain receptivity is possible to people situated thus. She called them “threshold people.” She said: “It is the task of the writer to become that permeable and transparent; to become ... a person on whom nothing is lost.”<sup>43</sup> Hirshfield called this “threshold consciousness,” where the writer surrenders normal conceptions of reality and being and adopts a new conception that includes the freedom of genuine love for “the many possibilities of being.”<sup>44</sup> Keeping oneself in a constant state of wonder and curiosity is essential for threshold consciousness. One must view the world with naïveté.

One could say that cultivating an attitude of openness to experience is cultivating mindfulness, a Buddhist concept, but a person doesn't need to be a Buddhist to practice mindfulness. A person should just pay attention to the present. A good example of this attitude is often experienced when one travels. Entering a new city, a new land, the senses are open; one sees, hears, smells, touches, and tastes with gusto, and with curiosity, scenes and a milieu that the natives take for granted.

*Exercise for a Group or for Staff Development*

To cultivate the attitude of openness to experience, one exercise may illustrate. The raisin meditation is an exercise in being mindful of taste and smell. We eat, slowly, two raisins, noticing the taste, texture, and smell. The leader sits in a chair, demonstrating.

Put one raisin in each palm.

Put your palms up in an attitude of openness.

Sit in your chair, comfortably.

Put both feet on the floor, your back against the back of the chair.

Close your eyes and breathe deeply.

In, 2, 3, 4,

Out 2, 3, 4.

After several deep breaths, with eyes still closed, and in silence, the leader says,

Now slowly begin plumping the raisin that is the heaviest. Don't break its skin.

Slowly bring it up to your nose, and sniff it. As you sniff it, feel the spurting of saliva from the sides of your mouth. Your body is responding to smell. Your wonderful body and its instincts and reactions are aware and open.

Now put the raisin into your mouth and shift it side to side, without breaking its skin. Feel it with your tongue.

Move it about, and, when you are ready, take a small bite. Taste the sweetness of the sun in the raisin bite.

Now take another bite, but don't swallow. Slowly chew the raisin, enjoying its sunny sweetness, its fresh flavor.

When you are ready, slowly swallow it, feeling it go down your throat to your beautiful stomach. When you are ready, take the other raisin and repeat the process, slowly and silently, enjoying the second raisin as dessert, being mindful of the process of eating. Keep your eyes closed after you have finished.

When everyone is done, the leader says,

Open your eyes.

Silently, without speaking, write a poem about the experience.

After everyone has written something down, the leader asks them to pair share, with a neighbor. Then the leader asks them who is willing to share with the group.

CHAPTER 2

Other sensory exercises follow, in the senses of sight (draw a detail of this room), hearing (listen carefully to this music and to this noise), etc. After initial exercises in openness, and observation, group members keep a log about how they would apply this principle, this core attitude, into their own practice.

*Exercises to Do Alone*

To cultivate the attitude of openness, here are some exercises a person can try.

- Take a new route home from work, and notice new scenery and objects.
- Eat a whole meal alone, without media, reading, television, or music, with the plate in front of you. Appreciate the food’s texture, smell, and appearance. Chew each bite 10 times before you allow yourself to swallow.
- Take a walk alone and pay attention to the sounds in your surroundings.
- Go to a museum alone. Wander around and when you see an exhibit that moves you, stay in front of it for ten minutes, concentrating.
- Do anything alone, take a notebook with you, and notice the Five W’s of journalists: Who, What, Where, What, Why.
- Draw. Drawing is a means of cultivating openness, and the drawing is not meant to be analyzed according to skill. Many people, when asked to draw, say, “I can’t draw.” The purpose of the drawing is to pay attention, to appreciate the presence and purpose of the object, the scene, the milieu. Don’t show anyone the drawing, but keep it in your Thoughtlog, look back at it occasionally, and marvel at how much you remember about what you drew by recalling.

*Ways Teachers can Embed the Core Attitude of Openness to Experience*

Here are some ways that teachers can embed the attitude of openness.

*Table 2.2. Ways teachers can embed the core attitude of naiveté*

<p><b>Ways Teachers can Embed the Core Attitude of Openness to Experience/</b></p> <ul style="list-style-type: none"><li>– Create a climate for mindfulness: Allow time for students to settle in to the activity</li><li>– Develop an attitude of non-judgmentalism, acceptance</li><li>– Make sure this type of engagement is present in all classroom activities, in order to create meaningfulness.</li><li>– Slow things down and give students time to explore the little details.</li><li>– Don’t provide an example; share an experience using sensory details.</li><li>– Since some children rush through things to move onto something else, do the relaxation technique and then have them draw an</li></ul>
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object and commit them to a time (20 min/ half hour) whence only that activity can be worked on.

- Look at something from a different point of view—below, above, slanted, twisted, etc.
- Notice small things in sharing – children should be specific when they tell someone they like their picture, paper– they can tell exactly what they like
- At the beginning of a unit you could choose an object, a song, a picture, a functional piece that is representative of what is being studied and let their minds wander/or wonder about its purpose, function, meaning that is representative of the thing/unit to be studied
- Change the decorations, design, “set up,” colors, textures, supplies, containers often. Ask children to notice what has changed to sharpen their sense of naiveté. Sometimes children are more mindful of their surroundings than we are.
- Create a game called *Private Eye*. Examine things closely—an apple, rocks, shells
- See connections between unlike things (synectics)
- Build observation skills—notice details, point of view
- Imagine all the ways this space has been used over the years. Imagine serious times, silly times. How were some of the ruts and holes in this old room made?
- Use the Invention Convention task to improve upon an object or create a new product explaining why improvement is needed or why the new product would be needed, focusing on details of the object.
- Daily or weekly notice the little details of each students’ work, appearance, energy, comments and make a positive statement to them.
- Feel an object with eyes closed and connect it to abstract ideas.
- Have a child look at something commonplace and describe, “putting value” on things you usually don’t pay attention to
- Bring in objects that are unfamiliar to the students. Play twenty questions on what the purpose of the object is. Ex: Old kitchen utensils.
- Have students see things in a new light by getting them to come up with alternative uses for something.
- Noticing the special/unique qualities of each child in the classroom, especially what brings them joy and how they express joy.

**Science**

- Observe the smallest details of nature; for example, draw the spots on butterfly wings when studying butterflies
- Look through a magnifying glass or microscope or the zoom lens on a camera, focus on and draw the enlarged image. And note the details.
- Scribe 1-foot squares. Describe what is within the frame.
- Examine a mosquito under a microscope.
- What would your view be like if you were an ant? A giraffe?
- Present scientific concept models and ask students to describe or explain the concept as they touch, smell, hear, and/or see the model.
- Use photosensitive paper with items in nature to help them see forms and shapes in a new way.
- Use *naiveté* to go through a simple experiment using the scientific process

**Language Arts**

- Write with an eye for detail, using sensory words and feeling words.
- Describe something by touch.
- Describe something common.
- Describe something by taste.
- Look at extreme close-ups (zoom books)
- Look at a common nursery rhyme. Examine what we know to be true.
- Dissect parts of speech. What do parts of speech *really* do? How is each dependent on a concept or an action?
- After reading a story, put artwork on the overhead and get the students to write what they see, and to explain what the artwork has to do with the story (art work comes with the unit).
- Before writing (middle school persuasive writing) have students reflect about how different voices and speaking styles influence them. Perhaps gather a tape of different voices saying the same short speech.
- Use exercises on “seeing” with sound, sight, taste, etc. to help students focus on details for story writing. Shut some senses down and enhance others. “Stories” need only be a paragraph long and not necessarily include the elements of a story, just detailed descriptions of sensory impressions.

- In writing memoirs, help children to “walk through” and convey the experiences they share.

**Social Studies**

- Bring something from another culture and ask how they think it was used.
- Imagine you are from a future archaeological dig. Find something in the room and make up a use for it. (Not its traditional use.)
- Taste the hardtack in simulation of a soldier’s life.
- Take a field trip around the building. Who are these people in these photographs, trophy cases, etc?

**Art**

- Re-examine art for its concepts, perspective attitudes, traditions, etc.
- Draw something you are looking at without picking up the pencil.
- After reading a story, put artwork on the overhead and get the students to write what they see, and to explain what the artwork has to do with the story (art work comes with the unit).

**Math**

- tudents who test out of a math unit can look at the concept through “new” eyes and create a game that would require a demonstrated mastery of the skill/concept.
- What is  $8 \frac{1}{2} \times 11$ ? Take a ruler, measure it on a surface, explore the ruler and the simplicity of the paper.

CHAPTER 2

**MY THOUGHTS AND INSIGHTS ON THE CORE ATTITUDE  
OF OPENNESS TO EXPERIENCE**

Possibilities:

- Describe how travel has contributed to your sense of naivete or openness to experience.
- Discuss how openness to experience has figured into your own creative life.
- Make an image (drawing, creative writing, music, photography, dance, diagram, etc.) of this core attitude.

## CORE ATTITUDE OF RISK-TAKING

Risk-taking in creative people has been noticed since creativity began to be studied at the University of California at Berkeley Institute of Personality Assessment and Research in the 1950s.<sup>45</sup> Risk-taking enables one to try new things. While introverted and shy creators may eschew physical risk-taking, professional risk-taking in creators may be manifested in trying new forms, styles, or subjects. The kind of courage they have is the courage to stumble, fail, and, after rejection, to try again.

Psychoanalyst Rollo May called it “creative courage,” which is finding the new, providing the vanguard’s warning of what is about to happen in the culture, showing in image and symbol, through their imaginations, what is possible.<sup>46</sup> The creative artists and scientists threaten what is. That is why, in repressive societies, those creators who speak out in image and in symbol are jailed or exiled. They demonstrate courage in the presence of censure and rejection.

### *Examples from Creators of Creative Risk-Taking*

For example, take the case of Nikola Tesla, the inventor of alternating current. He fought and won, fought and lost, trusted and was betrayed, and still remained steadfast to his principle that alternating current would eventually be preferred over direct current.<sup>47</sup>

The biographical literature is rife with examples of how creators stepped into the river of their domains and became, through the years, groundbreaking leaders through risk-taking work. Visual artist Alice Neel continued to paint portraits during the era of Abstract Expressionism, risking ridicule as a figurative painter, while around her in New York City, her colleagues painted abstractly.<sup>48</sup> The result was a shunning of her work. She did not get a one-woman show at the Whitney Museum of Art until she was in her seventies.

Creative writers, not known for their physical courage, are well known for their creative courage. What is the impetus for the coded telling of family tales, of private horrors, of straight-on traumatic memories, of needing to write it down? The true story resides in the place where one cuts one’s own jugular, stabs oneself in the heart, slashes one’s own wrists. Poet Anne Sexton, known for her frank confessional writing, was asked about why she dug so deeply into her own painful experiences:

There was a part of me that was horrified, but the gutsy part of me drove on. Still, part of me was appalled by what I was doing. On the one hand I was digging up shit, with the other hand, I was covering it with sand. Nevertheless, I went on ahead. I didn’t know any better. Sometimes, I felt like a reporter researching himself. Yes, it took certain courage, but as a writer one has to

take the chance on being a fool ... yes, to be a fool, that perhaps requires the greatest courage.<sup>49</sup>

Novelist Dorothy Allison, whose *Bastard out of Carolina* was a finalist for the National Book Award, also talked about the courage it takes to write close to what makes the writer most afraid: “The best fiction comes from the place where the terror hides... . I know that until I started pushing on my own fears, telling the stories that were hardest for me, writing about exactly the things I was most afraid of and unsure about, I wasn’t writing worth a damn.”<sup>50</sup>

### *Exercise for a Group or for Staff Development*

The exercise used for practicing risk-taking is called “The Princess and the Pea.” Take out a small piece of paper. List about five personal acts that would be risk-taking for you. You won’t have to share these, so be honest and probe deep. What would be a risk for you to take? Here are some examples.

- Call your mother-in-law and say you’re not coming over this Sunday to eat. Instead, you and your family are going to the beach.
- Tell your overbearing boss that a procedure can be improved.
- Try a new sport that you’ll look like a fool doing, like golf.
- Change that hairdo you’ve been wearing for the past 20 years. Shave the comb over.
- Sing in a choir, even though your voice isn’t the greatest. Choirs welcome everyone, as enthusiasm is required, and not talent. Since singing or speaking in public are two of the most feared activities for people, this will cut to the quick of risk.

Tear the margins of the paper so that only your list is visible. Fold this over and over, smaller and smaller, so that it resembles a “pea,” and place it upon their body (in a shoe, in a pocket, in a bra, in your coin purse), where it will bother you and where you will notice it often.

Now, hold hands in a circle and look at each other. Take a vow to try (“I will try, Jane”) to do one of the risks this semester. One student, whom I had the year before, came to me at a conference and said, “I took my risk. I finished a quilt and entered it into a quilt show. I didn’t win, but I did it.” This is a common result of this exercise. Each group meeting has a time set aside to discuss the group’s progress on risk-taking.

### *Exercise for an Individual*

Try something that would be scary for you to do. See exercise above.

### *Ways Teachers can Embed the Core Attitude of Risk-Taking*

Here are some ways teachers can encourage and embed the core attitude of Risk-Taking into the classroom.

*Table 2.3. Ways teachers can embed the core attitude of risk-taking***Ways Teachers can Embed the Core Attitude of Risk-Taking**

- Create a classroom atmosphere that encourages the freedom to take intellectual and creative risks. This goes along with the core attitude of group trust. Students should discuss what such risk-taking means.<sup>51</sup>
- Demonstrate risk taking (Tell your own stories of when you took risks, similar to the stories above).
- Try a new sport together where no one will be a star, perhaps ice-skating, skiing, or golf. Have fun with it.
- Have students do self-assessments.
- Assign non-graded “process” assignments.
- Make sure students see the rubrics by which they will be evaluated.
- Use learning contracts.
- Use Thoughtlogs.
- Make a spot in your room the creative “safe zone.”
- Do trust activities
- Give permission to be silly.

CHAPTER 2

**MY THOUGHTS AND INSIGHTS ABOUT THE CORE ATTITUDE  
OF RISK-TAKING**

Possibilities:

- Discuss how you or someone you know has displayed “creative courage,” or risk-taking.
- What keeps you from taking risks?
- Make an image (drawing, creative writing, music, photography, dance, diagram, etc.) of this core attitude.

## CORE ATTITUDE OF TOLERANCE FOR AMBIGUITY

The term *tolerance for ambiguity* comes from the research done by that IPAR (Institute for Personality Assessment and Research) group in the 1950s. Historically, the concept of tolerance for ambiguity is related to the notion of the authoritarian character (Fromm). In extensive soul-searching after World War II, people wondered why they had submitted to authority, even when authority was doing such heinous acts as were committed upon Jews and others in the concentration camps. The thought went that people who needed leaders to tell them what to do were more rigid in personality, and they suppressed any doubts about the rightness of their government's actions. Intolerance of ambiguity was theorized to be related to just going along, politically.

How the idea of tolerance for ambiguity is related to the creative personality, is that the creator must be able to see the domain without firm preconceptions, and must be able to act without knowing whether the answer is "right," and without depending upon authority.

### *Examples from Creators of Tolerance for Ambiguity*

Tolerance for ambiguity is necessary in order to not focus on one solution too soon. For example, abstract expressionist Mark Rothko would lie on a couch in his studio for hours and days, contemplating the placement of the shades and stripes and colors of his mammoth abstract paintings, rising occasionally to make a dab or two, mulling over the implications of these ambiguous forms.<sup>52</sup> As Allen Ginsberg said, "Nothing is black and white. Nothing."<sup>53</sup> Keats called it "negative capability," the ability to intentionally keep contradictory ideas in the mind.<sup>54</sup>

Likewise, psychiatrist Albert Rothenberg, who did extensive research on creators, especially creative writers, thought that creators used a Janusian process in creating, referring to the two-faced god Janus, who was able to face in opposite directions. Those who are creative are able to see perfectly well, both sides of the question.

James Simon, in a speech, noted that scientists who have authoritarian personalities are unlikely to make great discoveries, as they need more and more facts to confirm and are uncomfortable with tendencies:<sup>55</sup> "You have to be tolerant enough of ambiguity to be willing to speak or write without possession of all the facts." Theoretical physicist J. Robert Oppenheimer is a good example of this. He preferred to come up with ideas, but not to carry out the studies that would be required to prove the ideas; he left that to his graduate students.<sup>56</sup> Albert Einstein was described by biographer Walter Isaacson thus: "He retained the ability to hold two thoughts in his mind simultaneously, to be puzzled when they conflicted, and to marvel when he could smell an underlying unity."<sup>57</sup>

*Exercise for a Group or for Staff Development*

Tolerance for ambiguity is illustrated through a discussion of critical thinking, and its various forms. Classes can conduct a mock debate about current issues, for example, the response to the New Orleans hurricane fiasco, with some people taking the role of Homeland Security, and others taking the roles of the politicians and mayor of the city.

Any issue where there is no right answer will do. People who want right answers when dealing with the improbabilities of life are often made uncomfortable when there is no right answer. They must tolerate the fact that no such answers exist, though there may be better and worse answers. The Gaza War in 2009 provides a case in point. Israel retaliated, after constant rocket bombardment by the Hamas Palestinians, with air strikes and ground invasion of the densely populated Gaza strip. Thousands of civilians were killed. Still Israel persisted, in the face of world condemnation and a rise in anti-Semitism in Europe and elsewhere. The result was a weakening in respect for Israel and a surge in sympathy for Palestine. Those who had been blindly supporting Israel, even fellow Jews, felt a deep sense of ambiguity.

Another strategy is to use the critical thinking strategies from the Critical Thinking Network in evaluating ambiguous material. In a course I teach, called Teachers in Film, students learn that there is no right answer in evaluating the image of teachers in popular culture films, and they talk about it in critical thinking terms. Here is where creativity results from critical thinking.

*Table 2.4. 35 Dimensions of critical thought*

<b>Table 2.4: Strategy List: 35 Dimensions of Critical Thought</b> Copyright © Center for Critical Thinking, 1996. Used with Permission.		
<b>A. Affective Strategies</b>	<b>B. Cognitive Strategies Macroabilities</b>	<b>C. Cognitive Strategies — Microskills</b>
S-1 Thinking independently	S- 10 Refining generalizations and avoiding oversimplifications	S-27 Comparing and contrasting ideals with actual practice
S-2 Developing insight into egocentricity or sociocentricity	S-11 Comparing analogous situations: transferring insights to new contexts	S-28 Thinking precisely about thinking: using critical vocabulary
S-3 Exercising fairmindedness	S-12 Developing one's perspective: creating or exploring beliefs, arguments, or theories	S-29 Noting significant similarities and differences

<b>Table 2.4: Strategy List: 35 Dimensions of Critical Thought</b> Copyright © Center for Critical Thinking, 1996. Used with Permission.		
<b>A. Affective Strategies</b>	<b>B. Cognitive Strategies Macroabilities</b>	<b>C. Cognitive Strategies — Microskills</b>
S-4 Exploring thoughts underlying feelings and feelings underlying thoughts	S-13 clarifying issues, conclusions, or beliefs	S-30 Examining or evaluating assumptions
S-5 Developing intellectual humility and suspending judgment	S-14 Clarifying and analyzing the meanings of words or phrases	S-31 Distinguishing relevant from irrelevant facts
S-6 Developing intellectual courage	S-15 Developing criteria for evaluation: clarifying values and standards	S-32 Making plausible inferences, predictions, or interpretations
S-7 Developing intellectual good faith or integrity	S-16 Evaluating the credibility of sources of information	S-33 Giving reasons and evaluating evidence and alleged facts
S-8 Developing intellectual perseverance	S-17 Questioning deeply: raising and pursuing root or significant questions	S-34 Recognizing contradictions
S-9 Developing confidence in reason	S-18 Analyzing or evaluating arguments, interpretations, beliefs, or theories	S-35 Exploring implications and consequences
	S-19 Generating or assessing solutions	
	S-20 Analyzing or evaluating actions or policies	
	S-21 Reading critically: clarifying or critiquing texts	
	S-22 Listening critically: the art of silent dialogue	

<b>Table 2.4: Strategy List: 35 Dimensions of Critical Thought</b> Copyright © Center for Critical Thinking, 1996. Used with Permission.		
<b>A. Affective Strategies</b>	<b>B. Cognitive Strategies Macroabilities</b>	<b>C. Cognitive Strategies — Microskills</b>
	S-23 Making interdisciplinary connections	
	S-24 Practicing Socratic discussion: clarifying and questioning beliefs, theories, or perspectives	
	S-25 Reasoning dialogically: comparing perspectives, interpretations, or theories	
	S-26 Reasoning dialectically: evaluating perspectives, interpretations, or theories	

*Exercises for an Individual*

Avoid closure. Think about going on a trip. Do the legwork, but do not make final plans until the last minute. Note your anxiety level as the date looms. Tolerate it.

Avoid closure. Call people up at the last minute for a spur of the moment outing. Go.

Avoid closure. Do not do an assignment at work until the very last minute. Pull an all-nighter. Note your anxiety level. Tolerate it.

*Ways Teachers Can Encourage the Core Attitude of Tolerance for Ambiguity*

Here are some ways that teachers can encourage the core attitude of Tolerance for Ambiguity in their classrooms.

*Table 2.5. Ways teachers can embed the core attitude of tolerance for ambiguity*

**Ways Teachers can Embed the Core Attitude  
of Tolerance for Ambiguity**

**General Classroom**

- Build a climate that allows for opposing viewpoints
- Ask open-ended questions with no right answer (“What is good art?”)
- Value opposing viewpoints and don’t be threatened when students do have them
- Role-play ambiguous situations
- Start a debate society and make students research the problem, and during the debates, have them switch and argue several points of view. For possible topics, see <http://www.middleschooldebate.com/topics/topiclists.htm>
- Do the Creative Problem Solving process, as invented more than 60 years ago by Parnes and Osborn, where you alternate divergent production (brainstorming) and convergent production (criteria-finding).<sup>58</sup> See [ww.creativelearning.com/CPSbookList.htm](http://www.creativelearning.com/CPSbookList.htm)
- Have students list questions and topics that have no right answer.
- Read and discuss a novel, poem, or film. All good novels, poems, and films’ plots require a tolerance for ambiguity.

CHAPTER 2

**MY THOUGHTS AND INSIGHTS ABOUT THE CORE ATTITUDE OF  
TOLERANCE FOR AMBIGUITY**

Possibilities:

- How does your own tolerance for ambiguity affect your decisions?
- What experience with ambiguity has stuck with you?
- Make an image (drawing, creative writing, music, photography, dance, skit, diagram, etc.) of this core attitude.

## CORE ATTITUDE OF GROUP TRUST

In collaborative creativity, which is the kind that is usually encouraged in business and manufacturing, theater, dance, athletics, and music, the people in the group doing the creating have to trust each other. Leaders make sure that the people in the group feel comfortable taking risks, being open and naïve, have acceptance for differing views and for incomplete answers, and that they do the work with regularity and discipline. From the raucous team in a closed room writing the jokes for a talk show or situation comedy, to the football team studying the game mistakes after losing the big one, members of a group must be confident enough and have enough trust in the process and in the group to be able to move on, to take criticism, and to do more.

Working in a group creates interdependency, as each member has a role to play, and a job to do, and they cannot be egotistical or selfish, or the whole project will suffer. One person cannot dominate; everyone must play and experience together. Trust is necessary among the members of the group. Each team or ensemble has its own culture. One must look for a “good fit.” Creativity researcher Keith Sawyer called it “group genius,” and he chronicled studies where the creative community had more juice than the individual.<sup>59</sup>

However, even when the creator creates alone, he/she is really not alone, for what I have called the “Sun of Community and Culture” on my Pyramid of Talent Development is operative; the work is judged by peers and connoisseurs of the domain; the creator socializes with and learns from other creators in the domain. No creator is isolated from the domain’s rules, laws, and members.

The phenomenon of the “cluster,” “a collection of related companies located in a small geographic area,”<sup>60</sup> illustrates the importance of group creativity. Silicon Valley in California, and the Silicon Fen in Europe are examples. These enterprises include research think tanks, educational institutions, businesses, and other forms of activity that interact and create creative capital. They are in proximity and the feed off of and nurture one another. The Silicon Valley, in 2003, had over a half million jobs at high salaries averaging \$120,000, double that of the average U.S. worker.

Similar to the idea of the cluster, the idea of the “node” indicates the necessity for group trust. One person in the technological ether may create an attraction because of what he/she knows. The person may be anywhere, may be working in his/her pajamas, but what he has created attracts others of like mind, who gravitate towards his magnetic resonance, building upon what he has created in the technological sense.<sup>61</sup>

### *Examples from Creators of Group Trust*

The American Abstract Artists group in the 1930s gave each other problems at their meetings, as they experienced rivalry as to who would be the best teacher of

abstract art, and who was the best abstract artist. Arshile Gorky would give them problems such as doing a painting with only the colors red and black, and they would vote as to whose was best. They would also produce a group painting and vote on “who was the best draftsman, who is the best colorist, who the best in textures, and so forth.”<sup>62</sup>

Mathematical creativity is thought also to be that of the individual. The mathematician sits in the think tank and thinks of proofs, scribbling numbers and formulas in the solitude of the ivory tower, and publishing the proof to the acclaim of the few other mathematicians who can understand. This is far from true. The mathematical community was shocked when number theorist Andrew Wiles solved Fermat’s Last Theorem in 1994. He had worked for eight years in isolation, before he published it. He revealed his proof in a series of lectures at Cambridge University. Every day he revealed a little more. The lectures became crowded, as the mathematicians waited for the final proof, which came on the last day to loud applause, as Wiles said, meekly, “This solves Fermat’s Last Theorem. I think I’ll stop here.” Mathematical genius Paul Erdős condemned Wiles as being selfish and glory-seeking because he did not consult with other mathematicians, and he felt that the Theorem would have been solved earlier if Wiles had done so. Even then, a mistake was found in the complicated proof, and Wiles had to have the help of a colleague, Richard Taylor, in order to patch the hole in the proof.<sup>63</sup>

Composer John Corigliano said that his musical friends inspired his work: “For the clarinet concerto, the inspirations were a clarinetist, the conductor Leonard Bernstein, a theatrical man, and my father ... who had been concertmaster ... For the *Pied Piper Fantasy*, the inspirations were James Galway.”<sup>64</sup>

### *Exercise for the Group*

Group trust in the creativity course is developed through affective activities, whereby group members feel that they can take risks without being ridiculed or teased. The sessions begins with a caveat based on the advertisement for Las Vegas: “What is said in creativity group stays in creativity group,” to encourage confidentiality and no gossip about what people said. Each course meeting, group members must read their essays about focus questions aloud, and other members give them feedback. I also take group members on field trips, where they see and meet each other outside, and travel together, sharing personal experiences.

Another exercise to build group trust is to practice feeding back to each other through an exercise with fingerpaint. Fingerpainting levels the playing field, as everyone can do it. In creativity group, we first do a meditation. The tables are set with newspaper, a large piece of glossy fingerpaint paper, a paper towel, fingerpaint jars open and placed randomly around the tables, a bucket of water on the front table, classical or new age music playing.

Sit with both feet on the floor, your hands on your knees in an open and upward position. Wiggle back into the chair so you are balanced. Close your eyes. Breathe in. Out. Slowly. In 2, 3, 4. Out, 2, 3, 4. Quietly and regularly.

Listen to the soft music as you breathe. Leave everything behind you, your job, your family concerns, the traffic you had to fight to get here. You are here, now, and you are in a safe place, with your friends and colleagues. Breathe. [Here I pause for awhile, as they settle in, and breathe.] I am going to take you on a journey.

It is morning. You are walking east, toward the sun. [Pause.]

You are in a beautiful forest, on a path dappled with sun and shade, and morning birds singing and flying for breakfast. [Pause.]

The day is going to be warm, but it is pleasant now. You are full of hope and optimism, alone on this path, looking around you, delighting in the smell of the woods, the damp smell of earth and the soft rustle of the pine trees you are passing through. [Pause.]

You walk along, noticing your surroundings, in a state of peace and acceptance. [Pause.]

The birds tweet, and the trees move slowly in the dawn light. [Pause.]

You walk along the path toward the light off the water. [Pause.]

There, through the trees, you see water gleaming, and a beach. [Pause.]

You pause at the edge of the beach, noticing the slow rhythmic waters lapping at the shore. [Pause.]

Over there, you see a smooth rock, right next to the water. It has an indentation that will just fit you. You sit on the rock, remove your shoes, and put your feet into the cool water. [Pause.]

You are happy. Content. Peaceful. You sit, watching the sun rise, watching the waves lap, and think about the things that have been rising within you for the past few days. [Pause.]

An image arises as you contemplate here. This is an image from within you. It comes from your innermost self, and it has a clue, an answer, an insight, to what you need. [Pause.]

Hold that image and send it to your fingers. [Pause.]

Open your eyes and begin to paint. You may not speak to anyone while you do this, but be alone within the group, painting. If you need to begin again, there is more paper. When you finish, sit quietly listening to the music, and do not talk. Pull out your thoughtlog and write some thoughts while waiting.

When everyone is done, call for an art show. Rise up and quietly circle the room, studying each other's works. Then give each other feedback, according to the feeding back rules.<sup>65</sup> "We are going to consider each art piece, one by one. As adults, and as teachers, we are charged with judging student work. We give grades. We correct grammar. We give report cards. We are trained to judge people. This exercise is going to be difficult, because we are not going to judge, we are going to feed back. Don't say, "Awesome, dude!" or "You are so talented." Or "I couldn't do anything like that." Or "I think it's unclear what you're getting at." Those are all judging responses, or responses that lead to rulings. Instead, you must feed back. Begin your statements with any of these prompts.

Table 2.6. Feeding-back prompts

**Feeding back Prompts for Reacting to Work**<sup>66</sup>

1. This reminds me of ...
2. Give a descriptive adjective ...
3. I thought of ...
4. The work resembles ...
5. I see –
6. Awe—silence.

Pin each painting to the bulletin board, gather round in chairs, and each person take a turn, feeding back to the painter. Then the painter may speak about his or her intentions in the work. Take your painting home, and put it on the floor by your chair tonight while you watch television, study it, and remember what people said, reflecting on what you heard. Often great insight has been given to you from a fellow's comment. Group members often frame their paintings. I have done this exercise with over a thousand adults, and the experience is quite extraordinary for all of us. We end up with a feeling of trust, having experienced the loving concern and regard of our colleagues. When one does not feel judged, trust arises.

Here are comments from group members: "Not judging is a wonderful feeling! We are judged everywhere we go." "Not being judgmental is difficult, especially when making judgment is so much of what we do." "It was refreshing to release myself from the first typical reaction—like or dislike." "The idea of "feeding back"—instead of feedback suggests that we are all nourished by observing the work. Giving "food" or digested opinion—like comment back to the author suggests more of a reciprocal relationship. More of a two way continuum than a dead end street."

*Exercise for the Individual*

Join a group that focuses on the area of creativity where you want to work. If it's geology, join the rock hounds. If it's skiing, join the ski club. If it's mathematics, find the few others who enjoy solving proofs also. Men seem to have an edge in varieties of hobbies. As a person who has been long single and dated many, I have delighted in the fact that men have odd hobbies and they take you along with them while they practice. My oddest was the guy who was a hang glider pilot. He liked to crouch on top of high hills, listening to the weather on a short wave radio, talking with other loners like he, men in hiking boots and jeans, with plaid shirts, glasses, and the desire to run off hilltops and sand dunes with huge silken wings above them. I used this experience in my comic novel, *The Three-Week Trance Diet*, where the characters have a hang-gliding contest.<sup>67</sup>

Take a course from adult education in something in which you're interested. Building birdhouses on a bluebird trail in the local public forest? Do it. Birders are among the most passionate people around, and you can go on great hikes early in the morning, pointing your binoculars at trees and scanning bird books, making additions to your life list. Read the newspaper and find out where such groups meet. Check online. Do not be shy. You might think you are alone in your passion, but you are not.

*Ways Teachers can Embed the Core Attitude of Group Trust*

Here are some ways that teachers can encourage this core attitude, that of Group Trust.

*Table 2.7. Ways teachers can embed the core attitude of group trust*

**Ways Teachers can Embed the Core Attitude of Group Trust<sup>68</sup>**

- Establish a code of behavior in your classroom. It is a code developed by the group early in its existence, and not imposed from above.
- Model supportive behavior. Students will imitate you.
- Only discuss group issues in group discussions.
- Practice giving feedback (see above) that is not judgmental.
- Practice making positive comments about individuals.
- When a pattern of negative social behavior starts to develop, immediately act to change that pattern by taking the person aside and discussing it with him/her privately.
- When instructing or facilitating discussions, use the student's names, and sincerely compliment individual participants on their contribution to raise the general level of self and other respect.

CHAPTER 2

**MY THOUGHTS AND INSIGHTS ON THE CORE ATTITUDE  
OF GROUP TRUST**

Possibilities:

- Describe a time when a lack of group trust stifled your creativity.
- Describe a time when group trust enhanced your creativity.
- Make an image (drawing, creative writing, music, photography, dance, diagram, etc.) about group trust.

*Reprise*

These Five Core Attitudes may be modified and elaborated upon in any ways you want. They are not set in stone, either; I began with four core attitudes, then added tolerance for ambiguity, and may add others. But, revisions aside, at least these are essential for the creator to practice.

Remember, unless you want to, you won't. MOTIVATION is the key. I too am bored and exasperated by how-to books, so much so that I walk faster and don't browse when I pass the self-help section in the bookstore. But if you want to, try a few of the above exercises. Only if you want to—be more creative—cultivate the five core attitudes in your life.

## SUMMARY OF KEY POINTS

1. The Core Attitude of Self-discipline requires constant and regular practice in the creativity area in which a creative person want to work.
2. The Core Attitude of Naiveté, or Openness to Experience requires that a person notice the small things, pause, and reflect, and open the senses to the world.
3. The Core Attitude of Risk-taking requires that a person take a few chances, and venture into new territory in the creativity area, that he or she tries new and perhaps scary things.
4. The Core Attitude of Tolerance for Ambiguity requires that a person not foreclose on solutions to problems, and realizes that there are no right answers, only temporary best answers.
5. The Core Attitude of Group Trust requires that the leader and the group practice respect for each other, with no snideness or put-downs.
6. Each of these core attitudes has been practiced by real creators, and can be practiced by a group, an individual, and by teachers seeking to embed creativity into the curriculum.