Authentic Connectivity: A Pedagoge’s Loving Responsibility

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy

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Abstract

I learned to authentically connect by observing the pedagogues who mentored me. My lived experience with them inspired me to base my pedagogical approach on the constructs of community and engagement that youth dismantled by displaying increasing disengagement, which transferred into disaffected relationships.

This reflexive/narrative autoethnography investigates the problematic phenomenon affecting youth: the loss of authentic connectivity. I critically examine my professional journey with pre-digital, digital, and post-digital university students by analysing our common, cultural context, thereby interpreting my behaviour, thoughts, and experiences in relation to them. Hermeneutic phenomenology’s framework deepens the inquiry, as it involves a broader cultural, political, and social understanding to uncover deeper meaning in changing behaviours by reflecting on what is the lived experience of authentic connectivity for youth.

My comprehensive research evidences that youth’s technological addiction has influenced rapid brain evolution, and exploded their visual and multimodal skills. Neuroscience has broadly concluded that the new forms of learning technology offers are changing the way the brain processes information. I suggest that youth are experiencing a biological conflict, the brain’s
rapid evolution overwhelming more slowly evolving physical responses, effectively interfering with the flow of affective information that requires hemispheric transfer.

Neither moving beyond the premise of intelligence as being predominantly brain-based, nor acknowledging the cooperative role our bodily intelligence plays, as the latter is embedded in our lived experience, the greater understanding of the whole of learning, and its ally, authentic connectivity, cannot be achieved. I submit that moving beyond the absoluteness of a purely scientific approach to the brain, and integrating both human and cognitive sciences are key in moving toward a more holistic, autonomous learning pedagogy, so to layer our understanding of the ‘person process’, that which includes whole thinking and whole being.

To counter the affective devolution, which is detrimental not only to learning, but to being a well-adjusted person, this paper proposes a foundational shift in teacher training curriculum design by suggesting tools that foster an observational pedagogy, which seeks to teach those navigational skills that support higher-level analytical processes that can counteract the excessive reactions that impede learning, and teaching.

*Key Words: authentic connectivity, bodily intelligence, observational pedagogy, elemental bridges, hemispheric transfer, biological conflict, flattened affect, pre-digital, digital, and post-digital university students, interstitial thinking, affective identity, emotion regulation, bridge thinking.*
Acknowledgments

I gratefully thank my parents, Fernande and Gérard Paquette, who first ignited the fire that sustains my spirit; my husband, Edward, and my children, Alescia and Zachary, whose love has expanded my life-long journey; Hélène Gravel, and her generation of builders, who provided me with the mortar that buttresses my passion for change; and Lise Loiselle, whose friendship has supported my journey, and who taught me to be patient and organic to achieve my desired outcome.

I gratefully thank Dr. Edward de Bono, whose prescient work has profoundly influenced how I think about the mind, and one to whom present researchers should be enormously grateful.

I gratefully thank Dr. Linda Cameron, whose support during this process has been unending, and Dr. Jack Miller, whose keen questioning sharpened my focus.
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Dedicated to

Dr. David Booth,
the nonpareil of mentors,
whose reflective practice has helped mould the authentic pedagogue I strive to be.
Chapter 1
Conceptual Foundations

Youth do not have the requisite tools to regulate and navigate their affect in a non-linear world, the overreaching, ever-changing, and complex interconnectedness of technological integration redefining human connectedness. Recognizing the equal importance of affective/intuitive (subjective) and cognitive knowing, and rejecting the myth that emotions are uncontrollable responses intrusive to logical thinking, students must learn to expand their biological mind’s potential, and evolve to a deeper level of consciousness. Introducing them to tools that facilitate their interactions will ensure that technology is understood as an extension of biological and human potential, not as a replacement.

Background

Educational institutions are products of their culture, and must evolve with the times. Technology, arguably the greatest force to transform our culture, has so exponentially facilitated change, that the production and distribution of massive information are undermining the traditional flow of information, and disrupting the very foundation of the educational system. Content-oriented transmission of knowledge had been its focus since the Industrial Age, allowing us to better understand our physical world, but the Internet offers a new reality: to explore the virtual one, which is impacting how we learn. Thinking, no longer confined to physical space, has moved into a new world of unexplored virtual territories. Furthermore, the Internet is not the linear world of our traditional book culture. Children can connect and actively participate with anyone on the planet, but coping and thinking skills are urgently required, so youth may attend to their future, as we are experiencing the making of a paradigm shift, and perhaps more so, a change of era.

Neuroscientists theorize that the use of new technologies not only allows youth to expand their visual and multimodal thinking skills, but also brings about significant changes in brain function. Brain plasticity, they argue, ensures that the constant stimulation to which we expose our brain every day prompts us to adapt to meet new requirements. Besides, is not the brain but the tool that defines and moulds our way of thinking? Unfortunately, the education system has taken too much time to react to this phenomenon, and society now faces the consequences of not dealing with the ‘new’ brain, but, where to start?
The educational system must create an environment in which media and technologies, literacy learning, and experiences of agency, efficacy and pleasure can be brought together in productive ways that respect students’ experience of digital media (Chee, 2008), and identify the fundamental learning that needs to be gained outside digital media to distinguish the invisible context of values, attitudes and priorities we need to design to support our children’s learning as they grow up (Marcus, 2005). Accordingly, amid the multiplicity, complexity, and speed of change wrought by technology, curriculum designers have been busy proposing modifications. However, because of the politicization of education, no matter how well-intentioned pedagogical leaders are, there has been a tendency to propose changes that respond to each successive government’s political agenda. With its desire to distance its policies from the previous government’s curriculum reforms, educational system leaders continuously revise curriculum, yet society’s underlying conditions have altered so much that curriculum modifications only perpetuate the same system myths, and consequently, very little has changed for students.

Dewey recognized the value of substantiating and incorporating children’s everyday experiences in curriculum design, arguing that the “organic connection between education and personal experience” (Dewey, 1938/1997, p. 25) underlined the importance of understanding students’ actual experience, and how teaching and curriculum should be designed to allow for individual differences. His ideas, however, “never permeated the classroom realities of the American education system [and by natural extension, the Canadian education system], despite his central place in academic discourse throughout this century” (Palmer, Bresler, & Cooper, 2001, pp. 177-178), no matter Jung’s belief that human beings “live a double life – physically in the world and psychologically in terms of the inner drama” (Jacobi & Hull, 1973, p. 464).

Indeed, Dewey’s work, founded on bridging the “divide between existence in the world and living in spirit (...) to recognize the reality of both” (Dewey, in Jacobi & Hull, 1973, p. 465), championed the “whole and individuated Self” (Dewey, in Jacobi & Hull, 1973, p. 465). And Collier, inspired by Jung (Collier, 2011), defined two modes of awareness of human consciousness that “present us mentally with two fundamental modes of awareness – a two-way track to knowledge”: one “concerned with apprehending the physical realities of the outside world in time and space, courtesy of the five senses; the other with conveying the psychological reality of our inner world of thought and feeling, courtesy of intuition and imagination” (Collier, 2011, p. xiii).
Discussing Disengagement

The two-way track to knowledge was not reaching the classroom, however. No matter students’ access to dynamic, multimodal Internet-provided content, rich in visual and auditory stimuli, with its potential to open up their world to all possibilities, the excitement to do, or to stick to something, was diminishing. In fact, I observed their increasing disaffection and disconnection with the world, and sadly, pessimism about the future when I originally thought the opposite would be true. I progressively experienced their loss of focus and concentration, and their disengagement from class-based learning. Digital media certainly heightened sensory input, making them crave more stimulation, more information, more impressions, and more complexity, but I worried about its impact on their inner world, and the necessary “organic connection between education and personal experience” (Dewey, 1938/1997, p. 25).

I understood why learning in the virtual space was more attractive, since it favoured a greater sense of well-being. School exercised external motivation and control to promote and guide learning, whereas the Internet called upon their intrinsic motivation to do, giving them complete freedom and autonomy to attain their learning goals. Their choosing, however, to gradually, and then completely, disengage in class bewildered me.

Why did the availability of the Internet’s apparently liberating tools not translate into engagement? They clearly thought attending class was archaic, but were not spurring to action, expressing their dissatisfaction through passive resistance, and more to the point, apathy. Where had youth’s characteristic itch, at least in my generation’s terms, to change the world – and by extension, the educational system – with spirited, exuberant, and vibrant energy, disappeared?

Gleick recently proffered that youth are experiencing “information fatigue” (Gleick, 2011, p. 403), a stress-induced “apathy, indifference, or mental exhaustion arising from exposure to [and the attempt to assimilate] too much information […] from the media, the Internet, or at work” (Gleick, 2011, p. 403). Prensky (2000), however, had erstwhile argued that their attention span was not short for anything that actually interested them. As a teacher, therefore, I needed to reflect on the evolving definition that underlay youth’s expression of what it is to be, and what it is to learn, as their view and understanding of the world had shifted from what many educators understand as education’s sole purpose: the transmission of knowledge.
Living in the Gap

The dichotomy between youth and adults, therefore, now beyond the traditional definition of “generation gap”, a particularly outmoded 1960s construct, I started thinking about my work as “living in the gap”, an eventual rapprochement, seemingly impossible, and the breach, now indefinable and ever-widening. An educator, however, cannot live in the gap, as this entrains a loss of hope in youth, which can escalate into teacher burn-out, the “condition that ensues when as teachers we no longer know why we are doing what we are doing” (van Manen, 1990, p. 123).

In my case, determinedly moving forward to develop a deeper understanding in how educators need approach teaching led me to my pedagogic purpose, and the concomitant application of expansive thinking to think through the complexity. Adopting this mode of thinking enabled me to continuously reassess changing conditions in an attempt to synchronize with the emerging reality shaping youth, and interpret change nonjudgmentally. Widening my scope, I refocused to think beyond a one-sided interpretation of direct evidence to take “into account indirect evidence and circumstantial clues” (Vygotsky, in Palmer, Bresler, & Cooper, 2001, p. 34). Focusing on youth through a traditional paradigm’s lens would not lead to answers.

Indeed, my 25-year exploration of the creative process had led me to discover that to expand a situation’s boundaries, students’ minds had to be provoked to stretch beyond habitual thinking patterns. The best tool, interaction with individuals from other disciplines, highlighted different perspectives; their thinking patterns, different. In turn, the diverse perspectives opened new windows of thought, inciting my students to embrace the process of linkage, and move beyond set patterns, believing that it is “not the amount of knowledge that makes a brain. It is not even the distribution of knowledge. It is the interconnectedness” (Wells, in Gleick, 2011 p. 416), but interconnectedness itself became the issue.

The Case for Interstitial Thinking

Reflecting on what my ‘lived’ experience as a teacher could bring to my ‘living’ experience, I considered change over chronological time, which tracks “trends in individual behaviour, societal development, relationships and many other variables” (Jeffress, 2011), and “subjective time – time as experienced by consciousness” (Antonacopoulou & Tsoukas, 2002, p. 859). Antonacopoulou and Tsoukas contended that researchers needed to “get ‘inside’ the objects”
they studied, remarking that for “Chia, (...) live time – durée – is the only real time; chronological time is a mere convention. What really matters is how time is experienced, and human experience of time is indivisible and flow-like” (Antonacopoulou & Tsoukas, 2002, p. 859).

That kind of theorizing (...) asks [practitioners] (...) to move around the model, to draw on their own experiences and use a model in such a way as to derive personal insights about the situations facing them. As Hatch remarks, ‘to use my models, you need to put yourself into the space depicted in them, to move around the pathways they describe’” (Antonacopoulou & Tsoukas, 2002, p. 859).

Hatch’s approach (Antonacopoulou & Tsoukas, 2002), which I characterize as ‘interstitial thinking’, involves focusing on the interstitial space of connectedness; that is, that space between established, habitual thinking patterns amid what we know and have excluded, aware that every choice results in eliminating presently unmanageable possibilities that nonetheless still simmer. Casting aside what we perceive to be anomalies, contradictions, paradoxes, oppositions, conflicting ideas, or seemingly unrelated ideas is part of our habitual way of thinking. We withhold unexplored potential and new possibilities, but the linkage between familiar objects, or ideas, that usually automatically rises to our consciousness’ surface is simply the result of habits. As such, the process of linkage, which seemingly appears to happen naturally, or even magically, is not consciously explored, but when we learn to bypass automatic thinking, utilizing the qualities of the “heuristic mind” (Herbert, 2010), other realms of possibilities are revealed.

Heuristics, Herbert maintained, are “cognitive rules of thumb, hard-wired mental shortcuts that everyone uses every day in routine decision making” (Herbert, 2010, p. 9). They are, he continued, “amazing time savers (...) [because] many are an amalgam of habit and experience” (Herbert, 2010, p. 9), which prevent the brain from coming to a standstill, caught in the throes of decision-making. Because brains, however, are “stubborn in the most fundamental way, right down in the neurons (Herbert, 2010, p. 10), humans “default hundreds of times a day, simply because it’s effortful to switch plans” (Herbert, 2010, p. 10), relying too heavily on legacy thinking. In the end, what matters is “getting the balance right” (Herbert, 2010, p. 11).

And the balance lies within the interstitial space wherein lies what I term, invisible connective membranes, which graph and link diverse units in singular combinations to obtain different
wholes of higher connectedness – if one learns to embrace the interplay between affective and cognitive ways of knowing. The creative process, however, had taught me that achieving wider connectedness does not occur sequentially, as its movement expands one’s affect in all directions, which, while allowing one to view new perspectives and possibilities, necessitates regulative tools to navigate the journey.

This journey, however, requires individuals adjust their concept of time, higher connectedness moving on another level of temporal organisation. As such, they must submerge themselves into what I term, their mind’s portal to altered time frames, higher connectedness accessing the mindspace where time loops, flutters, stretches, fidgets, cycles, skips, and jumps, rather than the conventional one where time is experienced in a more mechanical, linear fashion.

**Disciplined Reflexivity**

Reinvigorated by my research, I recommitted to my students, and modified curriculum elements by addressing issues students were experiencing, hoping the revised content would have greater meaning, thereby reigniting their interest and curiosity, and motivating them to reengage. If the lessons’ subject-matter “grows out of (…) [one’s] own past doings, thinkings, and sufferings, and grows into application in further achievements and receptivities, then no device or trick of method has to be resorted to in order to enlist “interest”” (Dewey, 1902/2008, pp. 34-35).

There was an initial impact, but my efforts did not attain desired outcomes. As such, I engaged in a reflexive thinking process to enable “the turning of thought back on itself” (Mead, 1934/1967, in Antonacopoulou & Tsoukas, 2002, pp. 858), and reveal the engrained thinking patterns impeding true comprehension. I realized I was being “partial, (…) [unconsciously incorporating] assumptions” (Antonacopoulou & Tsoukas, 2002, pp. 858-859), and adopted Weick’s “disciplined reflexivity” (p. 860), consciously debating my biases concerning my students’ behaviour.

Redirecting my reflection from their outward behaviours, which “can leave out centrally important dimensions of people’s inner experience” (Daniels & Cohen, 2005, p. 9), and to how they were experiencing the phenomenon of the digital world, I opened myself to what “goes on behind that locked door of unconscious” (Gladwell, 2005, p. 58), the “mental valet (…) taking care of (…) [life’s] minor details (…) [as it keeps] tabs on everything going on around you and
making sure you were acting appropriately, while leaving you free to concentrate on the main problem at hand” (p. 58). Unfortunately, Gladwell continued, this also suggests free will is largely an illusion, contending that we are “simply operating on automatic pilot, (…) [and] a lot more susceptible to outside influences than we realize” (p. 58). Hoping to uncover youth’s silent dimensions of knowing and being, I tuned into their personal experience with the digital world, deeming that education accomplishes to “its ends both for the individual learner and for society (…) based upon experience which is always the actual life experience of some individual” (Dewey, 1938/1997, p. 89).

**Adjusting my Lens: Affective Identity**

Adjusting my lens allowed me to detect subtleties that had escaped me: physically disengaged bodies, glazed eyes, and vacant spirits. Youthful energy, which ignites ideas and connections wherein hopes and dreams, yearnings and aspirations, and passion, imagination and creativity dwell, was extinguished. They had little interest in moving ideas forward, or even sharing anything with each other. They spoke superficially, and avoided eye contact. They were reshaping their internal landscape by steadily abandoning the social realm for the personal one, needing only to care for oneself.

Underlying the mounting classroom disengagement, I uncovered my students’ morphing perception of connectivity, predicated by computer-mediated communication; that is, the meaning behind their shared experiences, or what human relationships with others meant to them, was taking on a new dimension. They were displaying a growing tendency to prefer virtual to face-to-face connectivity, and alarmingly, one that was increasingly pruning authentic connectivity – the mode of interactivity between/among individuals that embraces both cognitive (objective) engagement and affective/intuitive (subjective) ways of knowing to create meaningful relationships through a deeper awareness of self with others.

For Turkle, authenticity “follows from the ability to put oneself in the place of another, to relate to the other because of a shared store of human experiences” (Turkle, 2011, p. 6). Youth, distancing themselves from subjective knowing, thereby bypassing the very qualities of humanness with its intangible constituents of ideas, memories, emotions and perspective, were trading on progressively superficial connexions. Indeed, with little adult guidance on their digital
adventures during their developmental growth, they were struggling to find an affective identity, a much deeper gap in the teaching/learning landscape.

“Emotions are at the heart of teaching” (Hargreaves, 1998, p. 835), and a teacher has the “sensitive ability to interpret inner thoughts, understandings, feelings and desires of children from indirect clues such as gestures, demeanor, expression and body language” (van Manen, 1993, pp. 44-45), but youth’s resistance, or inability, to authentically connect, was impeding the meaningful interactivity required to better attend to their learning needs. By gradually pruning the conventional expressions of affect, body language, and physical energy, youth are effectively eliminating the distress signals upon which adults have relied to monitor their growth.

Vygotsky (Rieber & Carton, 1997), emphasizing the importance of social interaction in the development of higher cognitive development, and the role of culture in the transmission of cultural tools in shaping that development, argued that the result of interactions between individuals and their social environment instructs learning and thinking.

When the child enters into culture, he not only takes something from culture, assimilates something, takes something from outside, but culture itself profoundly refines the natural state of behavior of the child and alters completely anew the whole course of his development. (Vygotsky, in Rieber & Carton, 1997, p. 223)

With technology the new culture, and youth moving away from authentic connectivity, how can educators “increase students’ understanding for expanding their meaning making (…) [thereby] moving (…) [them] into deeper understanding” (Booth, 2008, p. 7)? Teachers can make a “difference (…) The human element, a magical connection, is at the heart of successful education” (Lanier, 2010 p. 1). If youth, however, are no longer affectively grounded, wherein shared societal values buttress their behaviour, how can the lamp be lit?

The important emancipatory role the Internet and other media have played in “claiming the right to individual autonomy by providing access to an abundance of different information granting individuals more autonomy of thought and action” (Lipovetsky, 2005, p. 22) has resulted in individuals expecting “more from technology and less from each other” (Turkle, 2011, p. xii), but, the “birth of information theory came with its ruthless sacrifice of meaning – the very quality that gives information its value and its purpose” (Gleick, 2011, p. 416). And when
behaviours “start to look like a set of algorithms”, all that is left is the “computational perspective”” (Lanier, 2010, p. 2), and essentially the pruning of thought and, as Aristotle opined, its images, which have the “power to evoke emotions that reveal inner knowing” (Shallcross & Sisk, 1989, p. 2).

Algorithmical thought, though, is potent. Purely rational, practical, and efficient, it gives youth the notion of control. They can create multiple identities, but more importantly, delete them at will when it gets too personal, effectively blocking authentic communication, unable to put themselves “in the place of another, to relate to the other because of a shared store of human experience” (Turkle, 2011, p. 6). But youth, enthralled by what computer-mediated communication offers: the democratization of knowledge transmission, have rejected what the best teaching does, the filtering and bequeathal of “memories, ideas, identities, cultures and technologies” (Lanier, 2010 p. 1). Problematically, students “could come to conceive of themselves as (simple) relays in a transpersonal digital structure” (Lanier, 2010, p. 2). The subsequent danger is that if students “don’t learn to think, then no amount of access to information will do them any good” (Lanier, 2010, p. 2), and I maintain that children who are unable to reflect upon their inside feelings will grow into progressively volatile adolescents whose only outlet will be to mete violence upon others, and themselves.

Educators need only peruse the kindergarten curriculum (Ontario Ministry of Education, 2010), and its renewed emphasis on play-based learning, to recognize the importance of authentic connectivity, wherein play “nourishes every aspect of children’s development (…) [forming] the foundation of intellectual, social, physical, and emotional skills necessary for success in school and in life (…) [and] “paves the way for learning”” (Canadian Council on Learning, 2006, p. 2). And play-based learning develops imagination, “the ability to reach beyond what is to what might be or should be, to open the way to the possible” (Greene, 2009, p. 3), and “above all, makes empathy possible (…) [and] “enables us to cross the empty spaces between ourselves and those we teachers have called “other” over the years” (Greene, 1995, p. 3), “becoming wide-awake to the world” (Greene, 1995, p. 4).

With technology generally being the “engine that propels us into unknowable changes” (Lanier, 2010, p. 2), educators must drill down into how youth create the values in which they believe to live their lives; that is, how their point of view and interpretation of the world are formed. Each
brain must learn “to invent itself”, and if learning “at its truest is a leap into the unknown” (Lanier, 2010, p. 2), so then is teaching, which, at its truest, is a leap into authentic connectivity.

Education, however, has done much to “sever the relationship between head and heart”, and, as a result, “in industrialized society we live in our heads, denying our deeper knowing and intuitions” (Miller, 2007, p. 4). If educators continue to be “more interested in testing students than exploring how they can learn and develop as human beings” (Miller, 2007, p. xvii), authentic connectivity is improbable. To counter internal fragmentation and disconnection, Miller called upon a “more holistic approach for a merging of reason and intuition” (Miller, 2007, p. 8) to facilitate the development of the whole person, citing “Neil [who] believed that if the emotions were free, the intellectual will look after itself” (as cited in Croall, 1983, in Miller, 2007, p. 219).

Youth’s escape into the virtual world, therefore, is their desperate cry to find authentic connectivity, believing to have found agency, and ultimate freedom. Educators, however, must address youth’s flawed construct of the management of the subjective self, which is, restating Miller (2007), fragmented and disconnected, and “at the mercy of impulses into whose formation intelligent judgment has not entered. A person whose conduct is controlled in this way has at most only the illusion of freedom. Actually he is directed by forces over which he has no command” (Dewey, 1938/1977, pp. 64-65). Furthermore, because of the brain’s quality of plasticity, the more time youth spend with digital media, the more the brain’s wiring changes, and consequently, the more flawed is the subjective self construct.

Youth are at the crossroads, perhaps on the cusp of redefining what it is to be human if they continue to entertain machine, rather than human, intimacy, thereby pushing authentic connectivity aside. Educators need to address the social implications: youth’s apparent willingness, or mostly, witlessness, to become automated beings, bypassing biological evolution. Uncovering the catalysts that have instigated changing behaviour is crucial in rethinking curriculum design.
In this chapter, I critically examine the catalysts that have driven youth drive to prune, albeit unconsciously, authentic connectivity – the very quality of our humanness, and that which engages humans to want to create, to engage, and to learn.

**Technology, the Brain, and Behaviour**

The overriding catalyst is technology. The theory is not new; researchers have commented at length on technology’s influence on the brain and behaviour. Some researchers have hypothesized that cognition is behavioural, building their theory on the assumption that “humans are nothing more than biological systems” (Sternberg, 2010, p. 12). Others have hypothesized that cognition is experiential, believing that the “soul/mind (...) [is] not physical, and [that] our freedom is connected to the role of the soul/mind in our actions” (Sternberg, 2010, p. 12). Neither extreme is “workable in a pluralistic society that must embrace both science and the actuality of human experience” (Varela, Thompson, & Rosch, 1993, p. 13), essentially the “whole, living being” (Noë, 2009, p. xv). Human beings must play a “conscious part” (McTaggart, 2011, p. xxii) to close the “gap between the objective and the subjective” (Knutson, 2010).

The gap is cyberspace, which has morphed the traditional construct of the physical and imaginative worlds into one that combines both (Poissant, 1998). It has influenced society to embark on Chaisson’s Life Era, marking a “shift where living beings gain the ability to manipulate matter and thus change the way that biological evolution evolves” (Chaisson, in Harris, 2010, p. 10). The structural processes of the ‘virtual power’ technology seemingly proffers, however, can produce is “false consciousness” (Rømer, 2011, p. 756), morphing youth’s perception of human connectivity. Educators need to “analyse and understand these processes so that consciousness can become fully itself” (Rømer, 2011, p. 756).

Youth’s access to technology has provided them with a point of comparison. They have discovered that learning is not a disconnected activity; a “contradiction of learning itself in a postmodern age; (...) the mind-body split bequeathed by Enlightenment rationality” (Jagodzinski, 2007, p. 47). It is “hardly surprising if children perceive schooling as marginal to
their identities and concerns—or at best as a kind of functional chore” (Buckingham, 2003, p. 311). In fact, the lure of cyberspace makes “most industrial-era schools seem dull and unresponsive” (Slaughter, 2002, p. 184).

Edwards (1989) maintained that we have a double brain with two ways of knowing, and as each of our hemispheres gathers in the same sensory information, each half of our brains handles the information in different ways. Lateralization, the fourth of the brain’s twelve functional organizing principles, considers that the left hemisphere seems to be specialized for language and functions that require sequential processing, while the right hemisphere seems to be specialized for visual spatial skills and functions that require simultaneous processing. Optimal learning requires that both sides of the brain work cooperatively (Berninger, & Richards, 2002). Media technologies’ visual culture, however, is rewiring the brain, with images “our culture’s primary purveyor of information” (Restak, 2003, p. 78). Images exert power over our brain, because they “are immediate and require no thought or analysis, (…) [and] the abstraction of language is superseded by the literalness of pictures” (Restak, 2003, p. 78). If the stimulation to which youth expose their minds is critical in determining how their brains work (Small, & Vorgan, 2008), it makes sense to examine how a visual culture affects how they think.

Youth’s newfound autonomy in the virtual world “gives them endless choice (…) [but] virtuality merely creates the illusion of endless choice (…) [and] not the fulfilment of having met and responded to a challenge” (Gidley, & Inayatullah, 2002, p. 23). “The young are now seen as, and actively identify with, a highly profitable niche market, and youth itself has become a commodity” (Bussey, 2002, p. 69), but marketing is also making “vices such as greed, envy, and self-centeredness into virtue” (Eckersley, 2002, p. 38). In short, society has “embarked on an interminable process of desacralization and desubstantialization of meaning that defines the reign of consummate fashion” (Charles, 2005, p. 14). Greenfield predicts that our “teen generation is headed for a sort of mass loss of personal identity” (Greenfield, in Cornwell, 2008) she calls the Nobody Scenario. By spending inordinate quantities of time in the interactive, virtual two-dimensional, cyberspace realms, she believes youth’s brains are headed for a drastic alteration. “They are destined to lose an awareness of who and what they are: not someones, or anyones but nobodies” (Greenfield, in Cornwell, 2008).
With meaning stripped away, youth are expressing themselves through the “gratification of personal wants, a pre-occupation with entitlements, and abrogation of responsibilities and a withering of collective effort” (Eckersley, 2002, p. 38). The weakening of personal, social, and spiritual attachments, and the loss of confidence that other people care, is prevalent. “A lot of students’ initial feelings of hopelessness (...) [stem] from a belief that other people, particularly adults, don’t care about our world and that change therefore is impossible” (Stewart, 2002, p. 191). Living on-line, however, means engaging in continuous solitary behaviour, since the “network has a structure, and that structure stands upon a paradox. Everything is close, and everything is far, at the same time. This is why cyberspace can feel not just crowded but lonely. You can drop a stone into a well and never hear a splash” (Gleick, 2011, p. 425).

Whereas traditions and religion, Ehrenberg posited, produced a “seamless homogeneity of collective beliefs, ruled by buzzwords like taboo, discipline, obedience, sense of duty, and sacrifice, new words now rule: extreme risk, change, competition, uncertainty, competition or decision” (Ehrenberg, 2002, p. 83). At first, individualism was associated to two essential values, “freedom and equality” (Lipovetsky, & Charles, 2005, p. 8), but it “set in motion a process where rights began to be more important than responsibilities (...) [compromising the] “needs of family and community” (Gidley, 2002, p. 8). This has led to the total emancipation of the individual’s self-fulfilment, by which the “great socializing structures have lost their authority, the great ideologies are no longer productive, historical projects no longer inspire people, the social field is no longer anything other than an extension of the private sphere” (Charles, 2005, p. 9).

Charles further argued that a hedonistic and psychologist culture occurred because of “mass consumption and the values it has put into circulation” (Charles, 2005, p. 9), thereby influencing the development of the individualist ego, the 1990s “me decade” (Elkind, in Gidley, 2002, p. 8). Society’s pleasure-seeking hyperconsumption has led to the “decline of the great traditional structures of meaning” (Charles, 2005, p. 14), and the “basic perspective of the globalization/technologization scenario (...) that things rise – more progress, more technology, more development, more wealth, more individuality” (Gidley, & Inayatullah, 2002, p. 25). The logic of consumerism feeds self-interest and egocentrism, values acquisition of objects, and steers individuals away from caring about others, leaving “little acknowledgment of the place of cooperative behavior, trust and openness” (Rooney, & Hearn, 2000, p. 95). Emphasizing
competition among self-interested individuals has isolated youth, and promoted segregation and exclusion, rather than cooperation and greater connectedness, reinforcing the Newtonian paradigm of “world-as-machine” (McTaggart, 2011, p. xx).

With youth living in a heightened state of continuous pleasure, being connected cannot compare with face-to-face communication. In order to “pull the student into its screen of learning, (...) more and more of the affective body has to come into play” (Jagodzinski, 2007, p. 47).

Heightened sensations, however, have a hypnotizing influence on behaviour by stimulating the brain’s reward circuitry. It is a short step to addiction, the result of “repetitive, high-emotion, high frequency experience (...) [that is influencing] neuroadaptation, that is, changes in neural circuitry that help perpetuate the behavior” (Holden, 2001, p. 981). The pay-off is simple: “‘feeling’ (...) [one’s] brain light up, (...) and “feeling” like (...) [one is] getting smarter. A lot smarter, and in a way that only a human can be smarter” (Carr, in Battelle, 2008). “Most of us have experienced similar sensations while online. The feelings are intoxicating – so much so that they can distract us from the Net’s deeper cognitive consequences” (Carr, 2010, p. 10), but because of the brain’s plasticity, we “become, neurologically, what we think” (Carr, 2010, p. 32), with even “its basic connections (...) being constantly updated in response to changing sensory demands” (Ramachandran, 2011, p. 25).

Therefore, in “our twitch-speed world, there is less and less time and opportunity for reflection” (Prensky, 2001, p. 19). “It’s not only deep thinking that requires a calm, attentive mind. It’s also empathy and compassion” (Carr, 2010, p. 220), but “emotions linked to our moral sense awaken slowly in the mind” (Damasio, in Marziali, 2009), and Damasio’s “study raises questions about the emotional cost–particularly for the developing brain–of heavy reliance on a rapid stream of news snippets” (Damasio, in Marziali, 2009). “If things are happening too fast, you may not ever fully experience emotions about other people's psychological states and that would have implications for your morality” (Immordino-Yang, in Marziali, 2009). Hence, “as the Net reroutes our vital paths and diminishes our capacity for contemplation, it is altering the depth of our emotions as well as our thoughts” (Carr, 2010, p. 221). Consequently, youth are victims of technology awakening their baser instincts, which are entraining and formatting them (Musso, Ponthou, Seuillet, & Vignier, 2005) to feed their impulses, whims, and caprices on demand.
Social network sites like Facebook, therefore, have great appeal, responding to youth’s need to connect and communicate, but have awakened a “peep culture” (Niedzviecki, 2009): an “unending narcissistic urge to self-revelation. (...) It’s a hypnotic idea: you need to know, you need to be known” (Niedzviecki, 2009, p. 4), but it is at arm’s length. “It is surely no coincidence, then that the activities social networking sites promote are precisely the ones weak ties foster, like rumor-mongering, gossip, finding people, and tracking the ever-shifting movements of popular culture and fads” (Rosen, 2011, p. 180). As Burton opined, “Moral decisions made at a distance are quite different than face-to-face judgments” (Burton, in DiSalvo, 2009). With no promise of permanence, the sites “free users from the responsibilities that tend to come with membership in a community” (Lifton, in Rosen, 2011, p. 187). Wellman and Hogan termed this, ‘Networked Individualism’, or “people connected to each other as individuals rather than as members of households, communities, kinship groups, workgroups and organizations” (Wellman, & Hogan, 2004, p. 394). However, as Goleman (2009) wrote, the human brain is designed for face-to-face interaction by picking up in a split second the thousands and thousands of cues that tell us how to fine-tune what we’re about to do to how the person is reacting to us right now.

The Study of Emotions

Eiseley contends, “We are becoming progressively psychologically unbalanced as a society” (Eiseley, in Collier, 2011, p. xix). Turkle argues that digital friendships are “nothing more than their superficiality” (Turkle, 2011, p. 17). Lanier asserts the “widespread practice of fragmentary, impersonal communication has demeaned interpersonal interaction” (Lanier, 2010, pp. 3-4). Gibson maintains algorithms “written for a computer to make connections between unconnected pieces of information and predict our behaviour (...) [are asserting] mathematical probability into corners of our lives where intuition, instinct and hunches have long held sway” (Gibson, in Basen, 2010). Society is losing, therefore, “confidence in decision making” (Gibson, in Basen, 2010). Human emotions, “what many of us consider so central to our identity as moral agents are no longer being regarded as the special longing of the human spirit but as a measure of brain functioning” (Restak, 2003, p. 117).

What sets humans apart is the “true expression of our free will. Our sciences, despite advertisements to the contrary, have no theory that can come to grips with this sort of
deliberation” (Sternberg, 2010, p. 14). The “highest levels of mentation (consciousness, emotion and intelligence) cannot be described in computational terms” (Schulman, 2009, pp. 12-13). A “campaign should be taking place now, influencing engineers, designers, business people and everyone else to support humanistic alternatives whenever possible” (Lanier, 2010, p. 22).

Youth are living a paradox. On-line, they indulge in their affect. Face-to-face, they withdraw from others to avoid dealing with this very affect. The difference? On-line affect is unmediated, and bound to physical pleasure; face-to-face affect requires effort and attention paid to one’s own affect and that of others, though it is bound to psychological pleasure. Society, however, has left face-to-face emotions unattended, and youth are ill-equipped to modulate them, which brings us back to the tension between two philosophical worldviews, which must be addressed, and resolved.

Youth are not to be blamed for moving away from face-to-face authentic connectivity, while society continues to embrace algorithmic connectivity, neglecting the study of emotions. De Sousa acknowledged this neglect: the “sheer variety of phenomena covered by the word “emotion” and its closest neighbors (…) [discouraging] tidy theory” (de Sousa, 2010), but emotions have become the “focus of vigorous interest in philosophy, as well as in other branches of cognitive science” (de Sousa, 2010), with social neuroscience trying to “identify biological factors accounting for individual differences in social behaviour” (Reuter, Frenzel, Walter, Markett, & Montag, 2011, p. 662). Briefly, social neuroscience posits that the “origin of all behaviour (…) can be linked to cognitive, motivational and affective processes located in the brain” (Reuter, Frenzel, Walter, Markett, & Montag, 2011, p. 662).

A renewed interest in emotions is of consequence to education, and I agree with Hargreaves who wrote that, unfortunately, “many of those who initiate and manage educational reform or who write about educational change in general, ignore or underplay one of the most fundamental aspects of teaching and of how teachers change: the emotional dimension” (Hargreaves, 1998, p. 835).

In Western thought, affect and emotion have been distrusted, denigrated, or at least set aside in favour of reason. The tendency to distrust – even deplore – emotion has been aggravated by the rise of professions with their insistence on detachment, distance, cool appraisal, and systematic procedures. At a time when teaching is struggling to be
recognized as a full profession, there is a temptation to regard emotion and affect as signs of unprofessional demeanor – things to be rooted out as part of the campaign to achieve professional status. However, even from this perspective, one could argue for the inclusion of affect and emotion in teacher education curriculum, i.e., it could be argued that one has to understand a phenomenon in order to control or eliminate it. But one could also argue that affect and emotion belong in the curriculum because they may enhance a passion for teaching, relieve a sense of isolation, and improve classroom performance. (Noddings, 2011, p. 151)

Not understanding the phenomenon that is emotion thwarts the discussion into the complexities surrounding subjective knowing, which leads to authentic connectivity, but paying “attention only to the behavior can leave out centrally important dimensions of people’s inner experience (…) [and] is not the whole story” (Daniels, 2005). As Rheingold posited, each “different perspective reveals something that the other perspectives do not reveal. Each different discipline fails to see something that another discipline sees very well. We need to think together” (Rheingold, 1998).
Chapter 3
Methodology

Investigating Ethnography

Sixteen years into an uncommon university program, in which the creative process underpinned its conceptual foundation, I was taken aback when faced with students who no longer wanted, or were no longer able to engage in the creative process. As a result, I was left with all-consuming, unanswered questions for which I required answers, since unexplained, significant changes had occurred too quickly to be fully comprehended. I was ‘out of the loop’, and could not conceive of moving forward without understanding why.

Because finding the means and tools to empower youth was – is – the driving force at the core of my ‘professional soul’, I needed to find a research methodology that would allow me to reflect on my experience. I also needed the freedom to thoughtfully elucidate my research as a reflective practitioner, by grasping my students’, and my, lived experience to better understand the catalysts that had changed youth’s behaviour so significantly. My investigation initially brought me to ethnography, since I presumed that the lived experience under investigation was contained to a cultural problematic situation.

Autoethnography: Pushing Ethnography’s Boundaries

Ethnography first appealed to me because of its “qualitative design in which the researcher describes and interprets the shared and learned patterns of values, behaviours, beliefs, and language of a culture-sharing group” (Harris, in Creswell, 2007, p. 68). Entailing the researcher as a “participant observer” (Ellis, Adams, & Bochner, 2011) in the culture, I considered this approach as particularly pertinent, since I was involved in a French-language program geared to a minority culture: Franco-Ontarians. I believed that the purpose of understanding a culture’s relational practice was to achieve a better understanding of the culture’s way of being.

The approach, however, did not seem to include ‘me’, and how my cultural patterns influenced my outlook, and my professional choices. Researchers “who turn to ethnography want to concentrate on ways of producing meaningful, accessible, and evocative research grounded in personal experience” (Ellis, Adams, & Bochner, 2011, art. 10). I found autoethnography pushed
the boundaries, since its “approach to research and writing that seeks to describe and systematically analyse personal experience in order to understand cultural experience […] [also] uses tenets of autobiography and ethnography to do and write autoethnography” (Ellis, Adams, & Bochner, 2011, art. 10).

I needed the autobiographical context because I considered recounting my experiences important insofar as I was the culture about which I was writing, but was also within, and without it. Into the process, I could not discount technology, a formidable, global, and cultural influence. Tellingly, “in addition to telling about experiences, autoethnographers […] also look at these experiences analytically […] by contrasting personal experience against existing research” (Ellis, Adams, & Bochner, 2011, art. 10). And since autoethnographers “recognize the innumerable ways personal experience influences the research process” (Ellis, Adams, & Bochner, 2011, art. 10), it is an approach that “acknowledges and accommodates subjectivity, emotionality and the researcher’s influence on research, rather than hiding from these matters or assuming they don’t exist” (Ellis, Adams, & Bochner, 2011, art. 10).

Choosing Reflexive/Narrative Autoethnography

Briefly, I chose a reflexive/narrative autoethnography, since it exists, as Ellis (2004) posited, “on a continuum ranging from starting research from the ethnographer's biography, to the ethnographer studying her or his life alongside cultural members’ lives, to ethnographic memoirs” (Ellis, in Ellis, Adams, & Bochner, 2011, art. 10). Similarly, it encompasses van Manen’s (1998) concept of “confessional tales” (van Manen, in Ellis, Adams, & Bochner, 2011, art. 10) […] where the ethnographer's backstage research endeavors become the focus of investigation” (Ellis, 2004, in Ellis, Adams, & Bochner, 2011, art. 10).

As such, the reflexive/narrative autoethnography not only emphasizes the reflective study of others, but also sharpens the researcher’s analytic reflexivity to analyze personal behaviour to develop an objective comprehension of the events and actions under consideration. In the process, researchers are also able to describe the ways they have changed through fieldwork with the intent of improving theoretical understanding of the observed lived experience. It is a form of inquiry that adds a form of critical inquiry in the telling of the story.
Technology: A Formidable, Global, and Cultural Influence.

In terms of moving through my lived experience with three cohorts of university students [and more recently, cohorts that include teacher education students]: pre-digital, digital, and post-digital, what I initially perceived as an isolated, cultural situation transformed into a “phenomenon”. I therefore needed to widen my investigation beyond the *prima fascie* linguistic, socio-cultural context, which extended my autoethnographic expression within hermeneutic phenomenology.

Both autoethnography and phenomenology sit within Husserl’s phenomenological concept of the lifeworld, the “world as we immediately experience it pre-reflexively rather than as we conceptualize, categorize or reflect on it” (Husserl, 1970b). To find the essence of a lived experience, therefore, one must attempt to unfold the meaning as revealed by our consciousness, rather than the meaning as revealed by the reality of daily life. As such, uncovering the essence of youth’s lived experience in parallel with my own widened the focus of my methodology in the hope of understanding what is the essence of the lived experience of authentic connectivity.

**Conceptual Foundations**

A qualitative scientific approach shapes the methodology of this thesis, while reflexive/narrative autoethnography, and hermeneutic phenomenology inform the research method in the discussion of its core: the problematic human phenomenon of youth’s disenchantment with the present educational system, which has translated into behaviours of disengagement and complacency in the classroom; arguably, the tip of the iceberg in behavioural and attitudinal factors predicated by computer-mediated communication that continues to morph youth’s perception of interactivity, and connectivity. If thinking about connectivity is indeed, as Turkle proposes, a “way of thinking about what we mean to each other” (Turkle, 2001, p. xx), technology’s “progress” is inexorably metamorphosing how youth perceive societal linkage, or disputably, the lack thereof.

As a pedagogue deeply involved in didactic relationships, analogous to van Manen’s “self-forgetful manner” (van Manen, 1990, p. 6), the rapidly-occurring metamorphoses prompted an urgent need to cast new light on the phenomenon, the better to understand the ever-changing relational scope in working and journeying with youth. These metamorphoses required meeting youth in their “weakness, vulnerability or innocence” [to experience the] undeniable presence of
loving responsibility” (van Manen, 1990, p. 6). Youth’s “moral claim” (van Manen, 1990, p. 6) called upon me and left me no choice. That “sense of the pedagogic Good” [was the] principle that (…) [ceaselessly guided] my actions” (van Manen, 1990, p. 6), and my reflexion: inquiring into what is the essence of the youth’s lived experience with authentic connectivity, and the meaning of youth’s shared experiences to develop a deeper understanding in how pedagogues need approach teaching; in essence, their pedagogic purpose.

To “create the fabric” (Creswell, 2007, p. 35) of my leap into authentic connectivity, I pondered van Manen’s exposition of Heidegger’s phenomenological reflection, which commented on the need to follow “certain paths,“(…) towards a clearing”, where something could be shown, revealed, or clarified in its essential nature” (van Manen, 1990, p. 29). However, since the “paths or methods cannot be determined by fixed signposts” (…) [they needed to be] “discovered or invented as a response to the question at hand” (van Manen, 1990, p. 29). Unscrambling the new meaning embodied in youth’s changing behaviours and interactivity practices required three criteria I deemed important to my research.

Firstly, the approach had to guide my research, and not adhere to a purely prescriptive procedure. This criterion freed me to respond sensitively and spontaneously to the time-sensitive flow of shared experiences, thereby enabling me to capture the often-unpredictable manifestation of my students’ variegated perspectives. The pursuit of those unexpected unique flashes of “knowing”, which permeate the body to reveal new insights and meaning, and the attention paid to these moments, are akin to gazing into a kaleidoscope, wherein light and mirrors reflect colour and patterns to create unique shapes, but the moments, like the images, are rarely repeated. As elusive are the fast-flowing images, as elusive are the perspectives, but one must be brave enough to let the images flow, and engage with the perspectives’ fluid dynamism to experience the richness of meaning of a shared lived experience.

Secondly, the approach had to focus on “gaining a deeper understanding of the nature or meaning of (…) everyday experiences”, those “insightful descriptions of the way we experience the world pre-reflectively, without taxonomizing, classifying, or abstracting it”, thereby offering us the “possibility of plausible insights that bring us in more direct contact with the world” (van Manen, 1990, p. 9). My aspiration to interpret my students’ unique perspectives of our shared lived experiences slotted into, as van Manen (1967) argued, the hermeneutical perspective of
studying in persons what is “incomparable, unclassifiable, uncountable, irreplaceable” (van Manen, 1967, pp. 6-7).

Finally, I needed to focus on uncovering those human science tools, which emphasize “discovery, description, interpretation and meaning rather than prediction, control and measurement” (Laverty, 2003, p. 2), and are particularly pertinent in intentionally heightening awareness to often-overlooked subtleties during a shared experience in the realm of subjective knowing. In short, quantitative science alone is an incomplete form of reflecting, and does not take into account society’s phenomenological complexity. As Merleau-Ponty contended, traditionally-defined scientific points of view, which consider one’s existence as a moment of the world’s, are “always both naive and (…) dishonest, because they take for granted, without explicitly mentioning it, the other point of view, namely that of consciousness, through which from the outset a world forms itself round me and begins to exist for me” (Merleau-Ponty, 2005, p. ix).

Since authentic connectivity was the lynchpin of my research, it was impossible to ignore the pull of phenomenology’s principle that “knowledge and understanding are embedded in our everyday world” (Byrne, 2001, p. 830), and the phenomenologists’ belief that “knowledge can’t be quantified or reduced to statistical numbers or statistics” (Byrne, 2001, p. 830), since I also “believe that truth and understanding of life can emerge from people’s life experiences” (Byrne, 2001, p. 830). In the end, hermeneutic phenomenology offered me the best approach to better grasp the paradigm shift the leap into authentic connectivity, accepting Owen’s argument that phenomenology is a “reminder that all knowledge is human made, and not timeless and unchanging” (Owen, 1994, pp. 261-274).

Situating the Conceptual Foundations in Curriculum Studies

A lived experience proved the impetus that led to my choosing a research methodology, which would embrace the notion of authentic connectivity, and the particular sensitivity required to move beyond observable behaviour, and reflect upon the important dimensions of inner experience. A human science methodology, therefore, which studies purposeful, conscious beings who create objects of “‘meaning’ that are “expressions” of how human beings exist in the world” (van Manen, 1990, p. 4), was eminently more pertinent. And, becoming an “insider”
(Creswell, 2007, p. 17) would enable me to pinpoint those “critical moments of inquiry (…) ultimately elusive to systematic explication” (van Manen, 1990, p. 34).

Studying relationships in their natural setting is significant, since capturing the veritable, holistic meaning of the essence of changing youth calls for a complex and detailed understanding, which must include the fullness of human experience, as lived. In summary, the fluid complex thoughts and feelings of changing youth in meaningful social situations allow for a more accurate understanding of their changing nature. And, since qualitative design opens to subjective knowing, it paves the way to learning how to implement a reflective practice, which entails learning how to continuously search for deeper meaning. Consequently, one acquires the tools to meet the challenges that stimulate pedagogical growth within a context of change. Reflective practices provide the mindset to re-think one’s understanding of modern society’s complex phenomena, and, as such, enable pedagogues to retool and reengage on an even wider social spectrum and learn to better deal with change.

**Methodological Foundations**

Husserl contended that phenomenology is best understood as a “science of phenomena” (1931/2009, p. 41), and of “essential Being”, which aims at establishing a “knowledge of essences” (p. 42). Van Manen (1990) maintained that it is the “study of lived experience of the lifeworld, or phenomenon” that “aims at gaining a deeper understanding of the nature or meaning of our everyday experiences” (p. 9). Moran (2002) argued that it is a “radical, anti-traditional style of philosophising”, which “emphasises the attempt to get to the truth of matters”, and describes “phenomena (…) in the manner in which it appears, (…) as it manifests itself to consciousness, to the experiencer” (p. 4).

The truth of which Moran wrote is also argued by Merleau-Ponty as the “study of essence”, “which puts essences back into existence”, and “places in abeyance the assertions arising out of the natural attitude, the better to understand them” (Merleau-Ponty, 1945/2005, p. vii). Asserting that the world is “always “already there” before reflection begins – as an inalienable presence”, Merleau-Ponty contended that phenomenology attempts to directly describe “experience as it is, without taking account of its psychological origin and the causal explanations which the scientist, the historian or the sociologist may be able to provide” (Merleau-Ponty, 1945/2005, p. vii). This study of essence, van Manen reminded us, “constitutes the essence of something (…)
construed so that the structure of a lived experience is revealed to us in such a fashion that we are now able to grasp the nature and significance of this experience in a hitherto unseen way” (van Manen, 1990, p. 39), and go beyond, as Sartre and Merleau-Ponty argued, the “narrow empiricist, psychological assumptions about human existence, broadening the scope of philosophy to be about everything to capture life as it is lived” (Moran, 2002, p. 5).

To move beyond the narrowness, therefore, my research required that I work alongside my students, for as Merleau-Ponty wrote, I “could not possibly apprehend anything as existing unless I first of all experienced myself as existing in the act of apprehending it” (Merleau-Ponty, 1945/2005, p. ix). As such, I focused on investigating how “things” evolved in my students’ consciousness to uncover the first meaning of phenomena within a lived experience, and “return to things themselves (…) to return to that world which precedes knowledge” (p. ix) and to the essences that make up the consciousness and perception of the human world. This conscious choice, however, “demands for a pure description which excludes equally the procedure of analytical reflection on the one hand, and that of scientific explanation on the other” (p. ix).

A phenomenological approach with ever-evolving criteria, therefore, would provide a pathway capable of responding to the emergent properties arising unexpectedly from the complex and dynamically organized systems inherent in human beings, and, in my case, the nature of knowledge and youth’s learning process, thereby introducing a fluid, flexible manner of thinking, attentive to subtleties, and better assisting me in learning to move with subjectivity to gain a wider understanding of phenomena. The methodology has undergone shifts, however. Husserl, considered the founder of modern phenomenology, and Heidegger, gave rise to two main schools of thought: Husserl’s transcendental school, and Heidegger’s hermeneutic school.

**Husserl and the Transcendental School**

Husserl explored the domain of pure consciousness, as he sought a method to gain understanding of the experience of human consciousness by trying to develop a specific procedure for examining the essential structure of experience itself. In so doing, he returned philosophy to the “life of the living human subject” (Moran, 2002, p. 5). The basic principle behind his idea – to find the essence of a lived experience by attempting to unfold meaning as revealed by our consciousness, is the “internal experience of being conscious of something” (Moustakas, 1994, p. 44), rather than the meaning as revealed by the reality of daily life. In so doing, Husserl retrieved
Brentano’s account of intentionality, or the “principle that every mental act is related to some object which in turn suggests that all perception has meaning” (Moran, 2002, pp. 8-9). To Husserl, phenomenology is the “study of the lifeworld – the world as we immediately experience it pre-reflectively rather than as we conceptualize, categorize, or reflect on it” (Husserl, 1970b), in van Manen, 1990, p. 9).

To uncover a past experience’s new, or deeper, meaning, and remove perceptual distortion, Husserl stressed that one had to divest oneself of all presuppositions and references to the factual, empirical world, and only be attentive “to what is given” (Moran, 2002, p. 9), by applying the concept of “bracketing of experience”: the “transcendental reduction or the suspension of the natural attitude in order to gain insight into the nature of the conscious processes themselves” (Moran, 2002, p. 12), and set aside ordinary judgments about the relationship between experience and the world. Husserl believed that bracketing caused a “transcendental experience” (Husserl, 1954/1970, p. 153), enabling one to “pass beyond intuitively given things (those of the Cartesian imagination)” (Husserl, 1931/2009, p. 147), thereby “establishing “knowledge of the essence” (…) and absolutely no “facts”” (Husserl, 1931/2009, p. 44). Moving from “judging thought, from factual (“empirical”) to “essential” universality, is the eidetic reduction” (p. 44).

**Heidegger and the Hermeneutic School**

On the other hand, Heidegger’s hermeneutic approach, which centred on text interpretation to explore the lived experience, advocated the “utilisation of hermeneutics as a research method founded on the ontological view that lived experience is an interpretive process” (Racher and Robinson, in Dowling, 2007, p. 132) that only occurs as one discovers how a particular experience has been lived, revealing the greater meaning behind the lived experience. Heidegger further expressed that understanding is the basis of interpretation, positing that there is no such thing as uninterpreted phenomena, as one’s lived experiences are always already meaningfully experienced, fully integrated into a life that is impregnated in social, historical, or social contexts.

By using the term, life-world, to “express the idea that individuals’ realities are invariably influenced by the world in which they live (…) [and] focusing on how interpretation is intrinsic to human existence” (Richardson, 1963, p. 35), Heidegger was more interested in the question of
“being” (ontology) than how we know things (epistemology) as pursued by Husserl, and his "life’s work was a single-minded attempt to reexamine the question of Being (…) through the manner in which it appears (or is hidden) in contemporary experience” (Moran, 2002, p. 195).

In so doing, Heidegger argued the impossibility of bracketing “our assumptions of the world (...) [believing] that as human beings, our meanings are codeveloped through the experience of being born human, our collective life experiences, our background, and the world in which we live” (Byrne, 2001, p. 2). Though the “hope of interpreting without prejudice and presupposition ultimately flies in the face of the way understanding operates” (Palmer, 1969, p. 136), the “very definition of what is presumed to be self-evident rests on a body of unnoticed presuppositions, which are present in every interpretive construction by the “objective” and “presuppositionless” interpreter” (Palmer, 1969, p. 136). As such, Heidegger urged researchers to welcome personal presuppositions and biases; confident this awareness would help them better understand another’s lived experience, and believing that an “interpretation of human existence cannot be neutral, dispassionate, theoretical contemplation, but must take into account the involvement of the enquirer him- or herself in the undertaking” (Moran, 2002, p. 197).

**Merleau-Ponty and the Existential School**

Both Husserl and Heidegger focused on accounts of lived experience, but I agree with Merleau-Ponty who maintained that since “all consciousness is consciousness of something” (Merleau-Ponty, 2005, p. 5), human beings cannot extricate themselves from the world to achieve consciousness of it, given their natural involvement. And since consciousness is not “necessarily an identifiable object” (p. 5), I believe the more aware we are of our own perceptions, and make them explicit, the more we can embrace others’ viewpoints. Can description, however, reveal the essence of a lived experience?

As van Manen argued:

[a] person cannot reflect on lived experience while living through the experience.

Thus, phenomenological reflection is not introspective but retrospective. Reflection on lived experience is always recollective; it is reflection on experience that is already passed or lived through. (van Manen, 1990, p. 10)
It follows that an account’s written description will be a researcher’s re-interpretation, which brings me to reconsider the importance of interpretation in exploring a lived experience. If describing a phenomenon is a process of recollection, then both memory and perception will come into play, neither of which may be accurate. In fact, Merleau-Ponty maintains that “perception is not an event or state in the mind or brain, but an organism’s entire bodily in relation to its environment” (Carman, 2009, p. 630), since the “body is our anchorage in the world”, and through which one captures a phenomenon’s essence, for it is in the body that we “learn to know that union of essence and existence which we shall find again in perception” (Merleau-Ponty, 2005, p. 144). “Such a notion, would thus confer that the context of all experienced sensation and all perception is the “world live pre-reflectively”” (Tymieniecka, 2002, p. 352).

The world is inseparable from the subject, but from a subject which is nothing but a project of the world, and the subject is inseparable from the world, but from the world which the subject himself projects. (Merleau-Ponty, 2005, p. 430)

On a practical level, this notion means a researcher must both retrieve the essence of a person’s verbal account of the lived experience, and involve the person’s bodily account of the lived experience by paying attention to body consciousness, and the “silence of spaces” (van Manen, 1990, p. 113), our body carrying the “deep truth [that] lies just beyond the words, on the other side of language” (van Manen, 1990, p. 112). A researcher must, therefore, synchronize both mind and body and focus on the moment to capture deep insight, acknowledging that while he may have a “harmonious and indefinite set of views of the object” (Merleau-Ponty, 2005, p. 68), he will never have the “object in its plenitude” (p. 69); but how does one go beyond?

**Van Manen and the Phenomenology of Practice**

Van Manen’s approach not only seeks to “uncover and describe the structures, the internal meaning structures, of lived experience” (1990, p. 10), but also “combines the descriptive phenomenology of Husserl, with an emphasis on the study of the world before reflection, and also argues that it is scientific and simultaneously asserts that it involves interpretation” (Dowling, 2007, p. 13).
Hermeneutic tries to be attentive to both terms of its methodology: it is descriptive (phenomenological) methodology because it wants to be attentive to how things appear, it wants to let things speak for themselves; it its an interpretive (hermeneutic) methodology because it claims that there are no such things as uninterpreted phenomena. The implied contradiction may be resolved if one acknowledges that the (phenomenological) “facts” of lived experience are always already meaningful (hermeneutically) experience. Moreover, even the “facts” of lived experience need to be captured in language (the human science text) and this is inevitably an interpretive process. (van Manen, 1990, pp. 180-181)

The hermeneutic, phenomenological methodology van Manen reflected aspects and features derived from two traditions: the human science pedagogy of the Dilthey-Nohl School, which employed an interpretive, hermeneutic methodology, and the descriptive, phenomenological pedagogy of the Utrecht School. I welcomed van Manen’s inclusivity, thinking my research would benefit from its broader range of tools, thereby allowing me to better respond to the ebb and flow of unfolding phenomenon by providing the requisite frame of mind to be present and attentive to the context of lived experience without the pressures of imposed structures and pre-determined content. Most importantly, hermeneutic phenomenological research “edifies the personal insight (Rorty, 1979), contributing to one’s thoughtfulness and one’s ability to act toward others, children or adults, with tact or tactfulness” (van Manen, 1990, p. 7).

In so doing, this approach emphasizes a person’s perceptual, subjective contribution. In fact, the multiplicity of viewpoints not only matters, but also is crucial in revealing the bigger picture’s essence – the wider realm of everyday reality that increases one’s understanding of the human condition. And finally, welcoming and valuing the involvement of the intuitive self in the process of inquiry awakens one’s intrinsic motivation and willingness to commit, as it becomes clear that one’s participation and investment matter in the process of gaining a broader understanding of human nature. And when one engages intrinsically, rigour and commitment follow, as “to be strong in our orientation means that we will not settle for superficialities and falsities” (van Manen, 1990, p. 33).

Needing to engage in a holistic process that went beyond traditional borders, and involved both my intuitive and logical intelligences to go deeper into the complexity of real life, I wanted to explore the interplay between both worlds of thinking: logic’s objectivity, meaning I remained
“true to the object” (van Manen, 1990, p. 20); and intuition’s subjectivity, meaning I remained “perceptive, insightful and discerning” (van Manen, 1990, p. 20).

**Pedagogic Orientation**

But, it is perhaps van Manen’s fundamental pedagogic orientation, “an investigation of the meanings of teaching, parenting, and related pedagogic vocations” (van Manen, 1990, p. 1), which resonated in me, an educator whose personal pedagogy mirrors van Manen’s contention that pedagogy requires a “phenomenological sensitivity to lived experience (children’s realities and lifeworlds) (…) [and the] hermeneutic ability to make interpretive sense of the phenomena of the lifeworld in order to see the pedagogic significance of situations and relations of living with children” (van Manen, 1990, p. 1). Enlightened by van Manen’s approach, I reflected on key research activities that could “animate inventiveness and stimulate insight” (p. 30) to help me discover how to respond to the essence of my students’ lived experience with the creative process.

Firstly, I committed to treating my inquiry “not as a problem to be solved, but as a question of meaning to be inquired into” in order “to act more thoughtfully and more tactfully” (van Manen, 1990, pp. 23-24) on the journey toward comprehending the lived experience. As such, one can proceed to the investigation of this lived experience; that is “the world as we immediately experience it pre-reflectively rather than as we conceptualize, categorize or reflect on it (Husserl, 1970b; Schutz and Luckmann, 1973) in van Manen, 1990, p. 9) as this “lived experience is the breathing of meaning” (van Manen, 1990, p. 36).

Interestingly, van Manen emphasized the importance of beginning an investigation as experienced in the field with the participants before reverting to outside sources of information or theories, thereby nudging a researcher to be more aware and attentive to daily life, and building sensitivity to attune to a situation, before focusing on “accounts of the phenomenon obtained from literature” (Cohen, 2001, p. 1). “Practice (or life) always comes first and theory comes later as a result of reflection” (van Manen, 1990, p. 15).

Consciously choosing to be a reflective practitioner directs attention toward understanding the participants’ interpretation of a situation. Slowing the thought process to consider “what is the nature or essence of the experience for these individuals” (van Manen, 1990, p. 10) uncovers
hidden insights “in the ruptures of the conversational relations that suspend us in the niches and expanses of the intersubjective spaces-spaces that we can inhabit and that inhabit us” (van Manen, 2011, p. 1) and that we habitually overlook. In so doing, “this demands […] re-learning to look at the world as we meet it in immediate experience” (van Manen, 1990, p. 184), giving us the “power to grasp one’s own possibilities for being in the world in certain ways” (p. 180). Once we stand in the context of a particular situation, the phenomenological approach offers many ways of collecting experiential material from other’s experiences. As Solomon contended, what “distinguishes phenomenology from alternative philosophies” is “its general insistence on the role of intuition” that not only “gives us necessary truths (…) of empirical facts”, but also of “necessary truths” (Solomon, 2001, p. 9).

From interviews to biographies, from autobiographies and personal life histories, and from diaries, journals, logs and art to close observations of situations for their lived meaning, the researcher must, as a “participant and an observer at the same time [always retain a] “hermeneutic alertness to the situations that allows us to constantly step back and reflect on the meaning of those situations” (van Manen, 1990, p. 69), directly intuiting the phenomenon as it appears in consciousness, the “only access human beings have to the world. (…) Whatever falls outside of consciousness therefore falls outside the bounds of our possible live experience” (van Manen, 1990, p. 9). Consequently, understanding another person is achieved with hindsight, as “intentionality is only retrospectively available to consciousness” (p. 182). Since researchers are interwoven in the research process, they cannot be detached from inquiry. To therefore shape the process, they must render their implicit preconceptions as explicitly as possible, and so begins textual interpretation.

As such, reflecting about the phenomenon through writing and rewriting, and moving back and forth between one’s description of their experience and one’s own, generates additional questions, encouraging the researcher to refer to published material to help emerge the essence of the lived experience and to “mediate” (van Manen, 1990, p. 26) among diverse meanings. My interest lies in the lived experience of the creative minds of university students, and their behaviour becomes the topic of my pedagogic reflection: the manner of “self-reflectivity (…) in which pedagogy tries to come to terms with self (the parent, the educator) and other (the child) (…) [and] reflects on itself while serving others” (van Manen, 1990, p. 89). Of course, the textual outcome will only be a single possible perspective on the lived experience, as the
meaning of any phenomenon is “multi-dimensional and multi-layered” (van Manen, 1990, p. 78), however, its value will lead to “action sensitive knowledge which (…) [will increase my]
pedagogic competence” (van Manen, 1990, p. 78).

The end result, a phenomenological text that aims to construct the essence of the lived experience of university students exploring the creative mind’s process to better understand its significance to the university classroom setting, will hopefully “engage the reader in pedagogic reflection on how we live with children as parents, teachers, or educators” (van Manen, 1990, p. 1) during today’s paradigm shift.
Chapter 4
A Cloth of my Own Making: The Warp and Weft of a Personal and Professional Journey

Playing with Fire

*It is true that by playing too much with fire, we take a risk, but we also take a chance: we might get burned, but we might also amaze and enlighten.*

Robert Lepage (2008)

A lifelong quest has imbued my spirit: the search for answers. Sparked by friends, colleagues, and educators – mentors in the big picture, I have joyfully run into the light, because however painful it has been at times, the results have been dazzling, a cloth of my own making. I have stubbornly chosen to be a gatekeeper, weaving the pattern of a journey, which should have been, at first glance, a simple one. I thought I might be an actress, theatre fulfilling an early desire to express myself. Though the art of acting was fascinating, and I could dig into my emotional reserves to flesh out a character, it did not quench what became a more fundamental need: understanding the process of the creative spirit.

However, I never do things simply. I also studied biochemistry, intuitively knowing, though I do understand the apparent contradiction between science and intuition, there had to be more than the flashpoint of an idea. I do realize I was a young woman who needed something to fall back on, and biochemistry would open, I thought, other doors like teaching, the theatre not exactly the career of choice for someone with my background. The study of biochemistry, however, forever ignited my curiosity about the brain and its functions, a curiosity, which combined with theatre, I now equate to playing with fire, the admixture foreign to either camp.

What I eventually discovered, albeit after dabbling in theatre, was, in fact, teaching, a choice which fulfilled, and still fulfils, my desire to mentor as I had been mentored, to drive as I had been driven, to enable as I had been enabled, to love as I had been loved. This story, then, recounts a journey; one, which has sustained me, and ultimately, which has propelled me to forge ahead, tackle change, and in my own small way, elucidate a process for which the tools are sadly lacking [and for whom they are urgently required].
Getting Burned

However, no matter how well intentioned, what one considers the best-laid plans are not foolproof. The students with whom I worked changed, or perhaps, I did. If I were to continue my work, if I were to continue on my journey, I had to reflect on my path and chosen goals. Facing change requires courage, but also a nurturing environment, one I wished to share with students, but in these times of exponential change, and dare I say, turmoil, I feared I had lost my ability to nurture, my capacity to understand, and the essence of my being, the fire in my belly. I needed to re-examine my motives about teaching, what I thought was important to teach, how I imparted information, how I dealt with individuals, and most importantly, how, or if, I had lost my raison d’être, my self-perceived faculty for connectedness. How could I teach about connectedness, if I had lost it?

I started decoding my journey, and began to re-evaluate my choices, seeking to distinguish those patterns that had shaped and guided my practice. I examined every choice. This regression technique soon led me to my parents who first shaped the person I became, and the importance I have placed on change, process, and ideas, and on the tools required to embrace them. This is not a journey about nature versus nurture, though. It is about patterns, and how they influence a journey. I believe we make choices, and as an educator, I still believe my role is to equip students to make other choices, to break free from those constraints that limit their journey, and their capacity to create.

Ah, the words finally come up: to create. What do they really mean? How do these words relate to connectedness, with essential life skills, and with other key notions I have explored like creativity, the creative process, and ideation? How do these words relate to my growth, to my focus, to my teaching, and for that matter, any teaching? Why do I consider the skills they can impart so important to youth? How can one think that creativity in its broadest definition is anything other than an innate quality we all possess, which can be easily accessed, and which need not be sharpened? I needed to find the answers.

First Brushes with Creativity: A Fire in my Belly

My first brushes with creativity were by means of my parents. Born in the 1920s, they were post-World War I children, but would also experience the Great Depression, and endure the results of
World War II. They knew pain, death, horror, and poverty, but mostly, embraced self-sufficiency.

My father, Gérard, left home at 15 to fend for himself, and registered in the quintessential school of hard knocks from which he graduated with honours, no formal education required. He learned to adapt to earn a living, and to feed his family by engineering his own tools, developing his own math, and ingeniously creating everything my mother needed around the house. Nothing was, and is, impossible for him to do. His mantra to me lit the first fire, by urging me to use my “inner eyes”, when confronted with a problem I complained I could not solve. “Just sleep on it,” he would tell me, “and your inner eyes will help you find the solution. But, you must believe that it’s possible.” He tweaked my belief by telling me it had to be our secret.

It was simple, and beautiful. He intuitively understood that a problem needed reflection, and the brain, time to sort through the dross to find viable, and alternate, solutions – the new patterns. Even today, when I attempt a seemingly insurmountable task, I remind myself of his words, and recall him in action; a slight 133-pound man, moving objects much greater than his own weight by using levers and pulleys, or inventing new tools that would help him do the job. He was leading by example, by being creative.

My father is an incredible man, open to change, and certainly atypical of his generation. His mind is flexible, he has a wonderful sense of humour, and he still keeps busy by finding new creative projects. Before retirement, his colleagues knew Gérard would make the impossible, possible; no project stumped him. He issues from that generation of generalists, the jack-of-all-trades, who had to learn through experience. They learned by doing, so did it all, no matter the hard times. They also understood the importance of working together, and helping each other. They were collaborators by necessity, collaborators because family was the essence of their being, collaborators because farm work fed them, collaborators because the connectedness fed their spirit, and allowed them to see beyond the ‘outer eyes’, a lesson in its own.

One day, he told us he had bought a property to build a cottage, and would need our help. We promptly agreed, with visions of lake elves nibbling at our toes. Our first visit made our jaws drop, however, the property overrun, in my childlike view, by millions of tightly spaced trees. He just laughed, sat us down, and told us the cottage’s story. Our eyes followed his every gesture, and our hearts, his every word, as striding the width and breadth of the property, he described
where each room would be. “It will be built of nice cedar wood”, he said, “and there’ll be a nice porch to play cards, or watch the sunset, or me come home from a fishing trip with a big fish to show you.” We all laughed, and brought down trees for weeks, naming each cleared spot by its future name: my bedroom, our kitchen… Soon enough, it was as we imagined it.

My mother, Fernande, was 12 when she learned to fend for herself; her mother passed away, and she had to care for her younger siblings, but this event did not temper her spirit. Throughout my childhood, I always came home from school, looking forward to see what new furniture arrangement was on the menu. Her overall enthusiasm and encouragement for school accomplishments, big and small, and her positive outlook on life, like no other I have known, was, and is, contagious. She always made me see the good in anything. Whatever challenges or disappointments I shared with her, she always said that that I just had to keep going, no ands, ifs, or buts. “You’ll see,” she would say, “it’ll only get better. You can do it. I see you working hard at it. Don’t worry, keep at it. It’s all good, don’t linger on it.” She trusted that believing in something, and working to achieve it, would make it happen.

The celebrations she hosted were ongoing, as she welcomed families for festive evenings of song, music, and limbo in our kitchen. My father’s kindred spirit, collaborative bees were matter-of-fact in our home, from clearing land to building a house or cottage. Working class beliefs and effort meant food was on the table. Even passing on hand-me downs were an event with my mother; she always sincerely told me how I transformed the look of my older sisters’ clothes. She was also a visionary, being the only one in her family to want her daughters to pursue an education; therefore, we did, with her love and support.

The warp threads of my life pattern were set. Hard work, seeing with my “inner eyes” and a collaborative spirit were taut on my loom. I would forever seek to weave these elements in my life and work. Connectedness is still the shuttle that skitters through the threads, as I seek to add to the pattern.

The Times They Are a-Changin'

Dylan’s seminal album, The Times They Are a-Changin’, released in 1964, echoed a decade that wrought change on a social level. It was inevitable that educational researchers and philosophers seek to improve the school system to better respond to the social climate, and so it was that
Ontario’s Department of Education commissioned a study of the province’s education system in 1965.

The Hall-Dennis Report, “released in 1968, pushed for sweeping reforms, including the abolition of grades, homework and formal exams” (Bergman, 1995). Child-centred schooling advocates dared to submit that learning be individualized, and should "reflect a new sensitive approach to education for the human being (...) [...] a kind of rebirth of a comprehensive program of educational opportunities focused on the child itself" (Hall & Dennis, 1968, p. 9). In essence, the report supported the development of personal autonomy, and a fresh look at social competence, moral assessment, creativity, professional competence, and intellectual work. It adopted Dewey's philosophy, which spoke to the thinking educator, whose theory of “learning through action urge[d] students to play an active role in learning”, providing students “the opportunity to really assimilate knowledge by allowing them to live by its own exploration” (Dewey, 1997, p. 19).

According to Dewey, we [could] acquire ideas, feelings, techniques (...) if we live[d] them” (p. 19).

Winds of Change

As a child of the 60s, I bridged both traditional 1950s values, and the 1960s winds of change. Still in elementary school when the Hall-Dennis Report (1968) arguably upended the school system, I would be a product of a fresh outlook on learning; however, it would take time to gain traction. In elementary school, creativity – and its associated by-products of collaboration and ideas – was neither particularly addressed, nor valued, and never considered as important, except for Friday afternoons. If the class had been “good” all week, time for art was the reward. At the time, however, “creative” meant following the teacher’s instructions; the sky was always blue.

Oh, how we tried to be good. The minute the teacher mentioned art, my classmates and I would simultaneously jump up, and yell in unison, arms stretched up to the ceiling, screeching, “Yé!” Madame would glare, and we understood that any further outburst would result in more grammar. We would quickly sit down, trying to hold back our smiles and bursting enthusiasm, and I would begin to feel a burning sensation fill my core.

We were so happy, unconsciously understanding this privileged moment as a gift freeing our minds; we were playing in a magical sandbox digging for buried treasure. To this day, I still
remember that feeling, and each time that hot spot fills my spirit, I know something good is on
the horizon. Little did I know I would repeatedly seek out that feeling in everything I do, and
sculpt magical sandboxes to rekindle the fire.

The Rise of the Franco-Ontarian

For Franco-Ontarians, the late 1960s were also full of change and energy. The founding of the
Parti Québécois in 1968 resounded on French-speaking Ontarians. René Lévesque’s promise to
move Québec toward sovereignty had significant consequences on them. Though understanding
the euphoria of the Québécois, they wondered about their future as francophones hors Québec
[Francophones outside Québec]. If their culture were to survive, it had to contextualize itself, or
be relegated to folklore. The Franco-Ontarian as creator was born.

Some early Franco-Ontarian artistic endeavours saw songwriter and singer, Robert Paquette, and
the multi-faceted artists of the Coopérative des artistes du Nouvel Ontario [Artists’ Cooperative
of New Ontario] take centre stage. Collective creation was the preferred form of theatre, and it is
not surprising that the form still influences Franco-Ontarian student productions; self-expression
is still the by-word.

It was a time of protest, and sit-ins, with people clamouring for their rights, and picketing for
social causes. As a minority, Franco-Ontarians had no shortage of causes to endorse, but started
with the right to a publicly funded French-language education at the high school level. (Though
the Ontario government extended funding to public French-language high schools in 1968, the
Loi sur les services en français [French Language Services Act] would not be entrenched until
1989.) Franco-Ontarians also rejected traditional values, though not as resoundingly as the
Québécois, but it was a period of transition, of exploration, of excitement, and of action: a true
climate for creativity.

Movers and Shakers

I was fortunate to attend École secondaire Macdonald-Cartier, which opened its doors in 1969, a
by-product of the Hall-Dennis Report (1968), the sovereignty movement in Québec, and Franco-
Ontarian political will. Wilful and spirited individuals, builders, and educators who fought to
pave a solid educational foundation for a culture in the making inspired me. They wasted no
time, and took charge of a plethora of activities, maintaining a high-energy school, because they were doers who had fought for French-language rights, believing that solidarity, hard work, accountability, and ethics were the watchwords. They were givers, rooted in strong collective values, and dedicated to a cause in which they all firmly believed, the affirmation of the existence of the francophone culture in Northern Ontario. If I took nothing else from them but their spirited energy, determination, and commitment to make things happen through hard work and tenacity, it would be enough.

For the first time, drama, or rather, theatre arts by its then appellation, would be taught in French, but everything would change by the time I walked through the school’s front doors in 1974, because Hélène Gravel had previously walked through those same doors in 1969. She would transform theatre arts, and its more traditional aspects of actor and technical training, and theatre history to sow the seeds for expressive arts, which she believed would not only help counter assimilation, but also help students draw on their culture to better empower them.

Her theatre troupe, *Les Draveurs* [The Raftsmen], pioneered visual and physical expression. She clearly understood cultural assimilation was diminishing the spoken word, and focused on visuals and movement to allow students to tell their story. I, however, prefer to think she was a visionary, who saw the future, and knew how important visual aspects would be, and how the loss of corporal ability would affect coming generations. She also discerned that control over one’s body, with her emphasis on physical exercise and expression, freed the mind, and allowed for better flow, the genesis of the creative process to which I still adhere, essential to developing self-confidence, communication, sensory acuity, concentration, and the desire to excel.

**Timing is Everything**

The theatre troupe became my primary extra-curricular activity. Gravel gave us permission to play freely in our sandbox, and encouraged us to play in each other’s. We soon connected them, allowing us to easily jump from one to the other. Their delimitating boundaries dissolved, as our ideas fed into – and off – of each other, and became intertwined and interconnected, until who thought what did not matter. What mattered is that we made “it” happen. In fact, building from each other’s ideas motivated us to discover our common journey. This adventure of serious play created complex and intricate designs and adventures, which forever remain engraved in my
mind. I fell in love with what I thought was theatre at the time, though I would later understand it was the creative process I loved; one I would always seek to nurture.

On a side note, creativity, within the boundaries of its most facile definition, is pleasure, that delight which makes us shiver when we have found a connection between and among ideas, but pleasure is only a bodily sensation. It is not enough to sustain the connection. The journey of the creative process teaches us, however, to ignite and keep alive the flame within us, to give meaning to life, enabling psychological growth. It teaches us how to take charge of ourselves, as well as help us discover what we can contribute. For having received such a gift, I vowed – a strong sentiment, but sincere in its youthful idealism – to help youth with whom I worked to discover their own source of positive energy to transform life, and enable personal agency to feed others with compassion and love, which are essential to a healthy growth process.

To this day, my respect and admiration for Gravel, who later became my friend, and co-creator of many projects, is beyond all boundaries. She gave youth the gift of knowing how to light and share their flame; surely, the greatest lesson a teacher, mentor, and friend could ever bestow. She was brilliant, a listener, an observer, a fighter for youth, doggedly determined, and always, a woman of integrity. She never played games; she explained her motives. If your own motives were unclear, you soon learned to articulate them, as she would remind you to reflect, the tool par excellence to revise where you were going and why. She had no patience for those who were lazy, but would not say they were. She was rather the flint that lit the spark. She was dedicated to her students, and the art of teaching.

She later shared with me having been inspired by Way’s (1967) book, Development through Drama, which focused on the development of a student’s awareness, concentration and intuition, and opened the door for her to new activities, games, and relaxation, warm-up and sensory activation exercises, moving her away from strict theatrical performance. The book only abetted her political will and her – and eventually my – belief that the answers lie with youth.

**Hélène Gravel and the Collective Creation Process**

I began my theatrical experiences during a full-blown adolescent identity crisis when I needed to find out who I was, and learn to love and accept myself. Recognizing this fundamental need in all adolescents, Gravel worked within the collective creation process. I quickly learned that life
has meaning when you devote yourself to an unselfish cause; it is the collective action, which builds solidarity and strength to help you achieve your goals.

Process was more important than product, and she chose games – play being elemental in finding delight and letting go of mental and physical constraints – and exercises aimed at developing listening habits, positive attitude, sensitivity, confidence, concentration and creativity. She stressed the importance of respecting one other, while we learned to give and share. We learned to generate ideas, and build upon them. The process led us to better accept ourselves. As a result, we staged good plays, but more importantly, we established a community that expressed its culture.

I learned that engaging in creative thinking – though I do realize I am adding a research layer in using this term – assisted individuals living in collective groups, and in my case, a cultural group, to find deeper understanding, and new meaning, life incessantly challenging humanity to change and grow. The associated growing pains assisted each transition to leap toward great moments of enlightenment, insight, and freedom, but only if one had the tenacity and the motivation to not give up along the way. Somehow, it all mattered, as psychological growth provided me the strength to believe in our human capacity to move beyond the shallow pool, and achieve seemingly impossible dreams. Therefore, I associated creativity, as most of us did, and still do, with art.

On a personal level, Gravel allowed me to grow up with confidence, and feel good about myself. From this experience, I developed my basic philosophy as a teacher: students should know and love themselves to establish a climate of learning and communication, fundamental characteristics to all students’ success, and to all career choices. Socially and politically, Gravel sensitized my awareness of my culture by moving my generation through the collective creation beyond the folkloric repertoire toward cultural contextualization.

Realizing I had “real” things to say, I involved myself in too many activities to count: I wanted to change the world, an understandable ideal for an adolescent, but the feeling has sustained me into adulthood. Indeed, I sought to quench an insatiable thirst for knowledge, for connection, and for answers by also immersing myself in science, then, and still, fascinated by how our body and mind work, and by the complexities of who we are, so eager to understand its mysteries. To this day, I follow in the footsteps of the many builders and visionaries who walked alongside me:
family, friends, educators, and colleagues. All deepened my sense of culture, and bequeathed me with intrinsic values, a visceral values system, which has shaped my way of viewing and understanding the world. No matter what changes occur in society, my belief in empowering students remains the most important principle in my teaching, since ensuring agency, freedom of speech for youth is what matters most to assure them a healthy future.

I still see Gravel rocking in her chair, reflecting on a job offer to direct a Stratford show. When she finally stood up, her motives were clear, as she said: “Mon cœur est à la bonne place, ici, parmi les jeunes.” [My heart is in the right place; here, among youth.]. She devoted her life to youth, and her actions defined her words. She was a builder, and nothing could entice her to leave a job undone. Sadly, my journey with my kindred spirit ended in 2000, when she passed away. She would thankfully live to see the launch of the program, her final dream fulfilled, but I know I have never travelled alone, since she has sent me friends and colleagues who also believe in the same dream: empowering youth.

**Postsecondary Education Choices**

I was at the crossroads of two worlds: Anglophone and Francophone. My mostly unilingual French-speaking parents had fought against assimilation by focusing on the French language and culture at home, and enrolling their children in French-language schools. They encouraged me to take full advantage of extracurricular activities to immerse myself in an environment they hoped would safeguard my language and religion – the two closely related in their generation. Believing in bilingualism, I considered myself privileged to speak two languages. (I still do.) Why prioritize one over the other? I needed, I thought, to immerse myself in English, to better shape my future. I had one language in my pocket; why not go for two?

Unable to choose between my two passions, theatre and science, I chose a university that would allow me to study both at the same time. I had searched for programs in universities that offered training in collective creation, but there were none at the time. I also had quite the time explaining my choice to department heads who justifiably said that studying both might prove difficult, but was determined. Theatre programs were all about preparing one for the professional world, and choosing an area of specialization: acting, writing, directing, the usual suspects. As a boundary crosser, a term I came to understand and acknowledge later in life, I needed to combine the arts with the sciences. No one told me about culture shock.
The language advantage I had extolled, I now know, was a chink in the biculturalism myth’s shield. Only when completely submerged in an English-language milieu, could I truly understand the differences between the two, but, at the time, and with full confidence and youthful spontaneity, I registered in an English-language program in Southern Ontario. Granted, I had been sheltered in what Sudbury was then, a small Northern Ontario town. I had not travelled, had not experienced life, and had no concept of multiculturalism. Therefore, it was in Toronto that I first came to understand the word, culture. Cultural differences were especially evident in my theatre classes, and I felt that what was most vibrant in the theatre I had lived was absent. I kept on with this journey, however, never one to give up on anything, and deepened my knowledge about the craft, and met incredible artists who would further help me shape my vision of the art of theatre.

I came to realize what I truly loved – Gravel probably gently warned me, but I was not listening – was not “theatre”, but the collaborative process involved in a production. In fact, the authoritarian method of working was not only foreign to me, but the competitiveness among the actors took me aback, since I had only known cooperative work and camaraderie. Furthermore, by focusing exclusively on acting techniques, an individual’s personal development was not favoured. In fact, we learned to repress emotion to toughen up to better deal with the harsh reality of the craft. My experiences had taught me that unleashing emotions was healthy, and would allow me to better know myself to channel this new comprehension into my acting. Unfortunately, repertory work placed little importance on creativity.

In contrast, the needs to express, invent, communicate, and create characterized Franco-Ontarian theatre. This new reality shook me, even as it fascinated me. I felt it important to comprehend how the craft I so enjoyed could entertain a different ideology from the one I had known. I determinedly embarked on an adventure, therefore, that would broaden my scope, and heighten my awareness and sensitivity to cultural differences to find new meaning and understanding.

The Importance of Nonverbal Communication

I had already developed a vocabulary, partly through my work with Gravel, which, for my university colleagues, was as foreign as the words of my mother tongue. Movement to me, was – is – visceral; with them, the emphasis was on control, and the mechanics of the gestures. Nonverbal communication, part of my innermost being, led me to discover that creativity and
expression were qualities inherent to my Franco-Ontarian culture. According to Rioux (1974), Francophones ensured their culture’s survival by practicing an oral tradition, recounting the stories of a people. I was a descendent of this ingenious race of storytellers who were not afraid to dream, to exaggerate, and to embellish. (I will later explain the significance and understanding I then attributed to movement, as it would later take on another dimension, and a new significance, as I ventured deeply into the creative process.)

I plunged into the practical theatrical experience to learn as much as possible by doing, and of course, never missed an opportunity to learn just a little bit more about artists who dared to create new forms of expression, as they all secretly fed my desire to create. Significantly, I was mostly attracted to those researchers and practitioners who pushed for a better integration of nonverbal language in the shaping of a theatrical practice.

Particular opportunities to work with Jeff Henry, Marcel Marceau, and Adrian Pecknold fulfilled the need for physical expression that was inherent to my existence, and created harmony and communication with my internal world, those “inner eyes” again, allowing me to function as a whole. (I would later study with Sagel, who introduced me to the Lecoq style in the late 1990s, and with the artists of the École de mime Omnibus in the early 2000s who specialized in the Decroux style. These would prove to be key elements to a better understanding of the creative process.)

**Playwrights’ Influence**

I discovered playwrights whose work confirmed, at least for me, that theatre needed to move beyond traditional textual references to a new form of expression. Artaud (1966) refuted all forms of language and social conventions to realize a full theatre experience. Western theatre, Artaud (1966) contended, had lost the essence of true theatrical form, because anything impossible to express with words was of little import in theatre. He argued the stage was a “concrete physical place which asks to be filled and to be given its own concrete language to speak” (Artaud, 1966, p. 37). This language, “intended for the senses” had to be “independent of speech” and express “thoughts beyond the reach of the spoken language” (p. 37). I particularly mention Weiss whose Marat/Sade sought to fill the imagination, feelings, and memories through images of conflict; Pinter, who attached great importance to silence and light; Ionesco, who
presented his theory of the absurd on stage, and Sartre, who used the stage to explain his existentialist philosophy.

Perhaps the playwright who most spoke to me, however, was Tremblay (1972), whose seminal play, *Les belles-soeurs*, defined Québécois culture and identity, and by extension, my own culture and identity. Realistic in form, language, and environment, the play polarized audiences, because he dared to write in *joual*, the slang of the common people, the tool *par excellence* to assert the Québécois culture, and an outward sign of an autonomous one that profoundly differentiated itself from French culture.

**Loving the Craft**

Yes, I did love the craft, but on my own terms, developing insight into what truly drove me: connectedness, self-expression, sensory exploration, movement… The people, who had shaped me, had heart and soul. I yearned to join their ranks, and thought theatre was the edge I needed to join their inner circle. This does not mean I paddled without purpose in university, waiting to be understood. I truly relished the work, and loved working with my fellow actors, as we listened to one another, tuning in to offer up truthful and honest moments, allowing both body and mind to be receptive, and heightening awareness to create magic on stage. It was that sacred fire, that communion, that flow of energy with the audience, that special attention spent on devising pauses, a look, or a movement, and that tension, leading to a moment of connectedness, the symbiotic moment of intense energy, between the audience and the actors, that moved me.

Sometimes, though, nothing worked. Sometimes, it was just a play, leaving the audience unsatisfied, and the actors dully milling about backstage. My scientific curiosity kicked in. Actors always want to put on a good show, but what differentiates a magical evening from an ordinary one? Since I was also studying science, I started looking into the brain.

I found that the brain likes comfortable patterns. If it perceives discomfort, or fear, the amygdala kicks in, calling out the troops. Actors initially seek to connect with the material, their fellow actors, and an audience. If the energy conduit is open, the magic happens. If, however, there is a break in the flow, which can range from one actor being off her/his game, or a technical glitch to the audience being less than receptive, the amygdala goes into survival mode, its main goal to protect its host. Vulnerability, a primary quality in an actor, is no longer an option. The show
does go on, but the fragile links connecting the audience and the actors disappear, the actors relying on stagecraft, rather than emotion.

I had an answer. Achieving connectedness was possible, but the question was how to keep the conduits open. An answer seemed to lie in the collective creations I had experienced in high school, where achieving connectedness seemed simpler. Because we were so invested in the productions, making choices from text to staging, we were comfortable in our vulnerability. The amygdala never had to take action. We, quite literally, went with the flow.

I now understood that, as much as I loved acting, I had a greater interest in exploring the potential of the transferability of mind energy. This brought me to study creativity, or rather, elemental creativity, the process that allows the brain to bypass the amygdala’s reaction to pattern changing, thereby giving it permission to welcome linkage, change, and vulnerability, as normal. Learning how minds connect has consequently always occupied a place of importance in my life. It would take a few years, but this discovery would colour a life-long journey.

After completing my degrees in theatre and biochemistry, I attended Teachers’ College, and dabbled on the professional theatre scene, but still missed the adventure of collective creations, actually any type of true creative project. I needed to channel my creative energies into long-term projects to share what I had learned. My love for theatre would remain, but my role within the artistic milieu would be dramatically different.

A Good Worthwhile Journey

Gravel came back into my life, and a new adventure began. We would combine our efforts in creating projects for youth in the arts, from staging collective creations with high school students, to creating projects in a Northern community, sorely lacking in services and resources. I eventually transitioned into teaching at the university level, which has been a most difficult journey, beauty and conflict, joy and sadness, and harmony and contradiction, notwithstanding. Daring to care without boundaries, however, gives life purpose and true meaning. As a good friend said, many years later, when my antennae had been bruised, “It’s been a good worthwhile journey.”
Once Gravel and I reconnected, we immediately started working together. I believe she had been waiting for me to put it together, though she certainly had not been resting on her laurels. I also believe I needed her to reaffirm my heartfelt knowledge that I was on the right path. I shared with her what I had learned about the arts from another culture, but was also able to tell her how avant-garde and visionary she was in her work with adolescents. We moved forward, acutely aware that empowering youth was definitely our point of connectedness, and the drive that motivated our core.

We also co-wrote, *Expression dramatique* [Dramatic Expression] (Gravel & Azzola, 1989), a textbook for teachers who taught dramatic arts. It echoed the curriculum’s orientation, which supported our deeply felt conviction that dramatic expression was the key. The curriculum (1981) was clear; it did not seek to “train young actors or technicians” (Ontario Ministry of Education, 1981, p. 12). It stressed the emphasis was on “students’ understanding of self and the environment in order that they may communicate on all levels” (Ontario Ministry of Education, 1981, p. 12). Another aim, socio-cultural identity, was added to the French-language curriculum. This was a first, finally corroborating what Gravel had been preaching for years, wherein a student “doit prendre conscience de son identité socio-culturelle et de son rôle d’animateur dans le milieu” [must develop an awareness of his socio-cultural identity and his role as facilitator in his community] (ministère de l’Éducation de l’Ontario, 1981, p. 12).

As it happens, social-cultural identity was the crux of the *Rapport Savard* (1977), which stated that “les écoles ne peuvent fermer les yeux sur le monde qui les entoure sous prétexte de n’exposer les élèves qu’aux valeurs sûres et d’ailleurs et d’autrefois”. [Schools cannot close their eyes to the world around them under the pretext of only exposing students to sure values from elsewhere and the past.] (Savard, Beauchamp, & Thompson, 1977, p. 46). It went on to powerfully argue that Franco-Ontarians favoured self-expression through drama.

“Imagination is More Important than Knowledge.”

We chose Einstein’s quote to set the tone for our book. [The quote (Einstein, 1931, p. 97) actually goes on: “For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand.”] It was – and is – an exceptionally pertinent reference for me, because it was the first time I had come across a scientist who understood the dichotomy I had felt most of my life. And he was an
important scientist, one whose work in physics was lauded, but one, who, in a few short words, acknowledged that process, and in my mind, qualitative connectedness, were inextricably linked with quantitative data. Profoundly impacted, his words sustain me to this day, and though still surprised, and somewhat saddened by both the scientific and artistic camps’ traditional inclination to divide and conquer over the other, present-day brain research comforts me.

Whether higher-order thinking, system thinking, creativity, creative thinking, ideation, and creative or ideation process, the point is that scientists are now examining how the brain is affected by the process of thinking, and conversely, how the process is affected by the brain. Granted, modern technology like fMRI does help. Seeing real-time brain functions soothes scientists, but one thing is now clear, brain plasticity means the brain is trainable; its functions are not static. However, the sciences, and certainly not I, were at the point to explain the process. Gravel and I were still working from our gut, we just knew; the world just was not quite ready to come on board, so our book offered exercises aimed at developing each student’s full potential.

We believed the focused intention of the exercises would free students to create, and ultimately, self-express. We recommended teachers focus on the importance of each student’s personal journey at her/his own pace, and focused on evolution, progress, and expression, rather than on knowledge, or talent. Considering the amygdala’s function to serve and protect, we proposed teachers establish a climate of confidence in the classroom by being open and honest with students. We also asked students to be open and honest with their peers. We put forward that the verbalization of lived experience was necessary to understand one’s path and progress.

We also suggested that, after each exercise, teachers take the time for students to discuss and share (as opposed to talk about) thoughts, feelings, and concerns, so they could ascertain they were not alone in experiencing certain emotions and frustrations with life experiences. We stated that there were no right or wrong answers in this process, and that an unencumbered and censor-free dialogue was essential to avoid blocking either one’s creativity, or that of others. Respect was the only valid and necessary directive. We understood students needed to dig deep, and pose the hard questions to fully see who they were, where they stood, and where they were headed—the cornerstones of self-awareness. Even then, we noted the importance of mastering dramatic expression techniques, and how they applied to any learning process and to all career choices.
Belief is Everything.

By the time the book was published in 1989, I had been teaching part-time in the university’s English-language Theatre Department since 1986, and Gravel and I were talking about a program to fill the gap for Northern Ontario students who yearned for a French-language arts program at the university level, without having to leave the area. We initially thought a parallel venture with the English-language program would be a good starting point, but the university college hosting the program had a unilingual mandate. Undeterred from reaching our objective, it only fuelled our motivation, as another phenomenon was influencing education by the end of the 1980s; computers were making their way into schools.

If I emphasize this phenomenon, the implications were many. French-language schools were investing heavily in technology, partly in response to the education our parents had received from humanities-driven collèges classiques. English-language schools were also investing, but Franco-Ontarian leaders felt there needed to be more francophone scientists, technocrats, and businesspersons to better influence political will and provide future mentorship. They knew computers would deeply influence society, and had decided technological expertise was key.

This led, however, to a concept of accountability gaining traction in education, a movement that acutely affected the import of arts classes in schools. Science and technology labs were usually better equipped than drama and fine arts classrooms, though of itself this is unimportant, since the arts were usually on the backburner in most schools. It did mean, however, that the old enemies were meeting once again on the battlefield. The learning involved with science and technology was quantifiable; one could “account” for it. The learning involved with the arts, some theorists argued, was qualitative; how could one truly evaluate it? And, if one could not evaluate, was there learning?

In 1987, however, the communicative approach had made its way into schools. Its proponents contended that students developed language skills by living experiences of communication. This theory proved to be a cornerstone in the program’s design, and one we felt would counterbalance the belief that only the sciences and technology had social weight. Two researchers in particular, Richard Courtney and Dorothy Heathcote, influenced our thinking.
Richard Courtney.

Courtney (1974) had made the case that the “dramatic imagination is at the centre of human creativity, and so it must be at the centre of any form of education that aims to develop (…) essentially human characteristics” (Courtney, 1974, p. 272). The work presented four components: the philosophers and their vision of drama, the recognition of modern psychology and its influence on education, sociological and anthropological thought, and finally, the relationships among thought, language, learning and creative and dramatic expression. He argued that dramatic activity was an eminently social phenomenon, based on communication and interpersonal relationships.

In this vein, the history of dramatic art corresponded to a person's thinking process and her/his sociological development. Imitation and identification of the individual, the two constants in the relationship between humans and society, the history of drama was the source of all civilization. Courtney (1974) placed dramatic arts at the centre of learning, and creativity, thereby concluding that the discipline should be the focus of all curricula, and that it must be at the centre of any form of education that aimed to develop essentially human characteristics, no more important than in times of technological upheaval. Courtney’s (1974) quasi-encyclopaedic work is still one of the most important references for any research related to the dramatic arts.

Dorothy Heathcote.

Heathcote (Wagner, 1979) worked from a situational approach. She would play a minor role in a group, assume the “Mantle of the Expert”, and guide it while respecting its development and desires. This approach mirrored several elements found in collective creation, and I was interested to see how she used these techniques in the classroom. She strongly believed in collective awareness, and distanced herself from the individualization that had hitherto marked theatre arts classes. Although her approach was intuitive, the method was analytical, so her teaching approach easily married the arts and science. What influenced me most in Heathcote’s approach was the emphasis she placed on thematic content, a literary approach to dramatic expression. It went beyond facts, and universalized every situation.

I understood the import of Heathcote’s contribution to the teaching philosophy I was adopting after seeing her in action, albeit on film in Three Looms Waiting. Two factors in particular stood
out: spontaneity and confidence, key for the method to succeed, because she walked a tightrope by creating from the group, and the here and now. Wagner argued Heathcote had discovered that “an essential element in her teaching [was] the taking of risks” (Wagner, 1979, p. 21). It followed, of course, that students also needed to take risks, as an essential part of their learning, but high school and postsecondary students did not necessarily develop the tools pertinent to risk-taking, so this became important to consider in the program’s design.

Finally, Heathcote attached great importance to the need of her students to work from the truest self, contending that what “is central in our personal lives will probably be the underpinning for the most important thing we want our students to experience when they are with us” (Wagner, 1979, p. 218). She advised teachers, “Rely on what you are!” (p. 218). This message transcended my teaching. Inspired, I decided to further expand my knowledge base, and reflect upon artistic and creative pedagogy in the classroom. Gravel and I found OISE, and discovered David Booth.

David Booth.

Gravel and I were fortunate. We knew we were walking an unbeaten path. Heathcote’s work had barely crossed the Atlantic, and had certainly not gained traction in French-language schools. (I presume to state that her method never gained traction in French-language schools) We were planning a program that would, we knew, cross boundaries, because though steeped in collective creation, a known entity, it would focus less on “theatre”, and more on process. The theatrical form would be the favoured method of final expression, but the result would be much less important than the journey. There were, however, still many miles to walk.

As fate would have it, David Booth, an inspired researcher and pedagogue, became our Masters advisor. A visionary man of action, and a role model from whom to learn, Booth has an extraordinary capacity to move with time and change, allowing him to remain connected with changing youth. His sensitivity, combined with his creative and intellectual capacities, never miss a beat; he sees it coming, and he gets it. He prefers to move toward change, the qualities of a great pedagogue.

He encouraged us – and all his students – to reflect upon the intent of our teaching practice. I was transfixed. He loved youth. It had been a while, other than Gravel, since I had met someone who truly understood what loving youth meant. His conviction transformed me. Any doubts I may
have had about my intent, which had always been about loving youth, the guiding principle in all my work with them, were erased. Any doubts I may have had about the direction Gravel and I were taking in designing the program were set aside. Our intent was sound, and it was honest. I was more determined than ever, and though my choice would ultimately result in harrowing misunderstandings, my conviction still holds true.

“Mastering” Creativity

Gravel and I worked together; deciding that our research in the concept of creativity, which, at the time was a new area of study, would substantiate our intuitive direction, and the program’s ultimate design. The diverse courses we took tentatively touched upon creativity, utilizing various definitions to support oftentimes-divergent theories. I decided to summarize the path creativity had travelled by examining its many facets in terms of curriculum content. As such, my journey brought me to explain why it was essential to give creativity the importance it deserved in learning by demonstrating its benefits at all academic levels. This, in fact, became the starting point in developing the rationalization of the founding tenets for the program we were designing.

Two people caught my attention: Boal (1980), who had trained in chemical engineering, but had chosen to work in the theatre, and de Bono (1970; 1990; 1992; 1994; 1996; 1999; 2000; 2006; 2008), who, though, a physician, was researching the creative process. I had finally found people who, like me, were not content to stay within a prescribed box of one against the other. Both were revolutionizing the way people thought. Boal’s (1980) political and revolutionary work was a thinking person’s theatre. De Bono (1970; 1990; 1992; 1994; 1996), working on creativity’s process and operacy, was arguing that creativity was trainable and transferable.

Augusto Boal.

Boal (1980) posited that traditional theatre was a one-way street by which “l’artiste produisait, le spectateur consommait; l’artiste parlait, le spectateur écoutait” [the artist produced, the audience consumed, the artist spoke, the audience listened] (p. 12), and that this imposed a culture, rather than reflected one. To contextualize culture, he developed the theatre of the invisible and forum theatre. Both theatrical genres combined fiction and reality, but, in the first case, a play, as a bit of fiction, was presented in a bar, on the street, or on a bus to people who
did not know they were, in fact, the audience. The play took on another life, a real life, since the audience believed the story to be true. In the second case, the play was presented in a somewhat more traditional fashion, with the audience knowing participants. Boal, however, added the joker. Any audience member could stop the play’s action at any time to redirect it in any direction. An audience member could also shout, “Stop!”, and replace an actor (1980). This, he contended, empowered the oppressed to take action on issues, and one that made perfect sense to me in terms of also empowering young Franco-Ontarians.

This theatrical form also respected the rules of the communicative approach. An actor had to be open to enter into communication with an audience, which rather than be silent and listening all the time, could verbalize its reaction. Without this exchange, there was no real communication. It also mirrored the essential element in all human relationships, without which the relationship between people became “intransitive, autoritaire, castratrice, inhibitrice” [intransitive, domineering, castrating, inhibitory] (Boal, 1980, p. 17). Boal favoured true democracy, another tenet that has coloured my teaching, and again influenced the program’s design.

Boal also contended that specialization contributed to hypertrophy elements necessary to accomplish a particular task, and to atrophy unnecessary elements for its execution, thereby creating an imbalance in humans who had several faculties and multiple roles to play. Autonomy required that an individual participate in all levels of development, and that “faire du théâtre n’est pas la propriété privée, la zone interdite, dont l’accès serait réservé aux acteurs” [doing theatre is not private property, an exclusionary zone, whose access is reserved for actors] (Boal, 1980, p. 21). Boal’s visionary point of view on the role and nature of theatre reached into my core. He spoke to me, a member of a minority, and intensified my choice of empowering youth.

Edward de Bono.

While Boal (1980) appealed to my idealism, de Bono (1992) appealed to my bent for scientific inquiry by defining creativity as a behaviour of the brain’s self-organizing information systems, whose logic was one of “patterning systems” (de Bono, 1992, p. 5). By analyzing the behaviour and potential behaviour of the nature of creativity, and how it worked, an individual could learn to “devise techniques to increase the possibility of new ideas” (p. 4), but creativity, he argued, was not “just a bag of tricks” (de Bono, 1992, p. 5). One had to “understand the logic behind creativity otherwise the techniques appear like mere gimmicks” (p. 5).
De Bono was prescient. He knew, as I came to discover in later conversations with him, that his theories would irritate conventional wisdom. Before creativity was taken seriously, much work would be required to change people’s attitudes. I was intrigued that a scientist was crossing conventional boundaries, and because many academicians – my innate rebellious spirit taking hold – thought his research approach was too pragmatic, more concerned with practice than theory.

My instincts, however, told me he was on to something. He was approaching creativity with a medical diploma firmly in hand. He was no lightweight. In reading and implementing his work I steeped myself in his theory, the logic of creativity, and the distinction he made between logical and lateral thinking. What intrigued me most was how his explanation of creativity brought me to see connections between verbal and nonverbal communication under a new light, a valuable concept, as I ventured in developing greater depth in my students’ creative thinking abilities.

De Bono (1992) discussed the code system humans have invented to communicate ideas. This system is quite functional, because the brain’s neurons, located in the left hemisphere, are highly specialized for the task of establishing and recognizing specific patterns. However, this system has its limits. While it can easily combine different patterns and add new ones, it has difficulty reorganizing existing patterns into new ones. The inability to reorganize patterns presents a major obstacle to process, as opposed to product. Whereas logical thinking helps to establish concepts, creative thinking seeks to change them. Creative thinking seeks to escape the constraints, routines, prejudices, and stereotypes in order to reorganize the existing elements into new forms. Thus, the left hemisphere of the brain is not equipped to serve the creative process.

Humans had invented verbal language to organize, a societal must, received information, resulting in left-hemisphere thinking de Bono (1970) called vertical thinking, the logical and rational aspect of his thought. They, however, had neglected to invent a nonverbal language to serve the right side of the brain. Elements like creativity, imagination, intuition, and humour, right-hemisphere brain functions de Bono called lateral thinking are little exercised, and greatly misunderstood (1970). Ultimately, this means that left-brain verbal tools can only describe a creative product, but cannot articulate the process accomplished at the subconscious and intuitive levels. Left-brain function can only invent new words, stacking the definitions vertically, of an ongoing right-brain lateral process. In the end, we were armed. We had modern research in our
back pocket, and a conviction we were going in the right direction. We could never have predicted the outcome.

The Long Haul: The Program’s Journey

The Rebirth of La Troupe

We had a long-term plan, but were there students willing to take up the challenge? Were there any university administrators and community leaders with sufficient vision to join in our quest? We began testing the waters in 1992 by re-launching La Troupe, the university’s dormant French-language theatre troupe. Its mandate was simple: collective creation. Students received no course credits until 1994 when our request that the university recognize the students’ investment as equivalent to a 6-credit course was accepted. It would take six more years before the program itself was accepted.

Gravel and I never wavered. We believed we had to equip students with tools that would help them bring new solutions to old problems. The society in which they would work would require flexible thinking, the ability to generate new ideas and create an environment conducive to communication; in short, the skills acquired by the development of creative thinking.

Advocating for Collective Creation as the Engine of Creative Thinking

We advocated for collective creation, because it required that all participants contribute to the process, the product mirroring their thoughts and feelings, opening the door to a more authentic experience than line interpretation. To transmit their thoughts and feelings, students would have to explore both vertical and lateral thinking, and push beyond the easier first idea the left brain would offer as a balm to the core of the idea the right brain was waiting to offer. This would involve hard work, the left brain resistant, and the right brain unaccustomed to the effort. Students would also have to collaborate with each other to build on each other’s ideas and reach an ultimate possibility. True collaboration would be a challenge, but would lead, we hoped, to a spirit of, as Boal (1980) urged, democratization, in which every person had a role to play toward a shared vision.

The spirit of the collective creation was certainly not ours. “The social impetus (…) was the generational surge of young artists whose passion for Canadian cultural nationalism in the 1960s
led to a demand for plays that probed the experience of Canadian life and history” (Filewod, 2010). What was new, however, was its introduction in a university setting. The collective creation method was a means to create, and design the artistic act, using, in particular, improvisation, because in it, one met the text, while in theatre, one started from the text. The method involved an unflinching exploration of theatricality to find a new aesthetic, as it ventured to redefine theatrical practice. It was an operacy mode based on the egalitarian dynamic of the creative act, and a fair and effective sharing of responsibilities and tasks.

The program’s first intent aimed to have students actively participate in a vast collective project of collective and individual identity self-assertiveness. This element would later take on a different dimension, but at this point, it was primarily a tool whose function was to create a space uniting young Francophones under one roof, their strength in numbers to tell a story. It was an opportunity to develop, and refine the necessary tools, enabling a community of individuals to learn how to work harmoniously and efficiently together as a group as a means toward empowerment to create solidarity, a necessary ingredient to find the strength to fight against the dominance, oppression, and unrealized potential of a minority group.

We believed the program would provide a milieu in which students could experience, and put into practice the theoretical principles of creativity to be taught in creativity classes, while living the collaborative dynamic necessary to gain better insight and understanding into the unexplored terrain of creative thinking, and reflecting upon the mind’s productive capability within the context of juxtaposing different minds. It was intended, first and foremost, to provide students with tools that would empower them with forward thinking, as they would soon embark onto the workforce, where scientific advances and technological innovation had not only created a world of complexity, but a world in perpetual change.

**Expressive Arts and the Case for Courses in Creativity**

We argued that to ensure the success of the program, and to attract enough students to justify it, it must at all costs be diverse, and meet several needs. It must fit in several areas, bringing together the expressive arts: drama, film, visual arts, dance, and music, and emphasize cultural identity and activities. We stressed the fact that, in French Ontario, the arts and creativity had been the first weapons against assimilation; a language and a culture had to create to survive. The new generation had to be capable of self-expression, and equipped to contribute to the
contextualization of its culture. The iconic ceinture fléchée [arrow sash], tourtières [meat pies],
and chansons à répondre [round songs] could neither save the language, nor the culture. Without
contextualization, both would eventually wither.

The city’s university was an obvious choice, we contended, having nurtured past successful
artistic endeavours for which it could justifiably be proud. It had, therefore, an important role to
play in the implementation of programs that met the needs of francophone students, and could
make the difference in French Ontario’s socio-cultural evolution. At the time, no francophone
university in Ontario had assumed the role of cultural leadership. If creativity were the tool that
might ensure Franco-Ontarians’ survival, why were there so few creativity courses in
postsecondary institutions? This university, we stressed, had the opportunity to innovate and set
new paths.

We suggested that courses in creativity would meet the needs of a varied clientele, contending
that the tools would benefit all students, no matter the subject area. Which student was not
hoping to present an original marketing scheme, an ingenious engineering design, or a fresh
approach in a writing class? We also argued that though professors could ask students to be
creative, without the tools to generate ideas, or the skills to move them forward, the request was
futile, and fell into the traditional view that creativity was strictly intuitive, and neither trainable
nor transferable.

Since we were also working with students in the field with La Troupe, we were keenly aware
they were finding it more difficult to research, analyze, and discuss work. They did not know
where to start, what to say, or how to link their reading with their learning. (On a side note, we
were arguing this over ten years ago. I presume to state the situation has not improved.) To
accomplish this, we argued, they not only had to be able to acknowledge others’ ideas, but also
have their own. In arguing their ideas, they could form opinions, and react intelligently, thereby
enriching the analytical process. We even dared say that the quality of student work would
markedly improve after training in creative thinking. Creativity, we argued, was a simple brain
skill alongside memory, concentration, and deduction. Our intent was patently clear. The
program did not presume to train professional artists; specialized schools had been doing an
excellent job for many years. We did dare to suggest, however, that we could train professional
thinkers.
We also suggested that creativity courses could benefit student teachers who, in the course of their career, would teach francophone students in the province, and could, therefore, potentially influence many future generations. We could see in our mind’s eye some 200 teachers a year utilizing creative thinking techniques to empower some 5,000 children and adolescents a year. We were supremely ambitious, utterly naïve, and wholly idealistic, but the belief was—and is—that the program’s content could counteract the tectonic societal shifts we saw coming, inevitably and unalterably changing what students—what humans—would need to cope.

**Methodology of the Initial Creative Practices**

The methodology of the initial creative practices I implemented stemmed from a reflection of my personal experiences with the creative process within the realm of theatre arts, as well as a reflection from a wide range of theoretical texts and research studies that inquired into the fundamental questions about creativity. However, as I gained more experience in the field, which entailed teaching creative practices to students, I began to alter and add other elements to the curriculum, as students’ responses and development highlighted areas on which to work that could only be observed, or discovered, through repeated practice and observation over a long period of time. As such, I will later reflect on each practice I introduced to explain what I learned over time about the development of the creative practice within an educational institution.

At the onset of the program, however, creativity was still an emerging field, whose teaching was absent in a formal academic setting. I understood my first obstacle would be guiding students to consider the value and import of creativity in their lives. If they, and those around them, did not understand its value, no amount of effort would matter. It would only mean the timing was off and nothing would come of it. In the end, I would discover my timing was off. I moved too quickly, though, at the time, I thought I was not moving quickly enough to meet both societal and client changes; lesson learned. People move at their own pace, no amount of wishful thinking can change that, though the trick is still not to stand still, waiting for the sky to fall.

In any event, I felt introducing creativity at the core of an arts program was the best place to start, creativity having a long history of being associated with artistic endeavour. Consequently, a creative vision at the core of an arts program would neither seem odd, nor questionable, and would give me the time to expand students’ minds to what modern researchers were writing about in the ever-expanding fields of creative studies. My aim was to develop students’ creative
thinking processes to empower them with a life-long thinking tool that would allow them to become independent learners and doers, and allow them to not only become autonomous 21st century theatre-makers, but also theatre-creators. I also aimed at expanding the very definition of art by showing students how this powerful thinking tool could make them into more multi-skilled and high-performing individuals, and consequently, open new job opportunities for them in the workplace. Creativity was – and is – an important tool to help humans think through complexity.

Indeed, with economic factors ruling decisions, and technology’s incessant chatter distracting us from real issues, creativity was an important tool in thinking about perspectives and possibilities. Time would only tell how students would respond to these new perspectives surrounding creativity, and how they would decide to apply them in their lives. I would also find out if other subject areas would embrace the tool I believe creativity is. Therefore, my journey of introducing creative thinking into students’ lives and academia began.

**Creativity at the Core**

Each year of study had at its core a creativity course, whose syllabus, built on the previous year’s theory, methodology, research, and tools, also informed the year’s other courses. As a result, students experienced creativity as a system, having its own organizational culture, which, in turn, illustrated the complexity and potential of the multi-faceted nature of creativity, and better assisted them in the practice of creative work.

To better serve students, Gravel and I decided that I would teach all the creativity courses to ensure continuity, and provide the window of observation to gauge students’ responses to the concepts underlying creative thinking, as well as monitor the changes in their thinking habits. This pedagogical choice was sound, and over the years did support the flexibility required to follow different cohorts’ learning rhythm. My observations, research, and copious notes from multiple discussions with students, in addition to the students’ own journals, were invaluable resources that served as the governing reflective material I used to better monitor and understand their progress. By pinpointing students’ thinking patterns, I established who they were, and which areas of creativity needed the most focus to better assist them during transitional periods, and create a safe learning environment coherent with their learning process.
This process determined the first levels, and obstacles, in the collective thought process, and thus, the collective creation’s direction. If there were disadvantages, it rested on my being for many years the only permanent staff member, so everything rose and fell with me, a major reason why I worked so hard to bring in artists-in-residence, guest workshop leaders, and lecturers. Students needed multiple viewpoints. They needed to build on their knowledge. They also needed to discuss or apply creative thinking’s tools to assignments outside of *La Troupe*.

**Innovation and Misunderstandings.**

Officially approved by the powers-that-be in 1999, the program’s framework, along with the support documents, was, what I now venture to acknowledge, misunderstood, but I unequivocally state, that no matter how many times I have read the documentation Gravel and I provided for approval, I am still awed by its foresight.

I do think, however, having taken the time to reflect on a 24-year process that the university power brokers, professors, and community leaders who supported the program, and eventually students who registered in the program, mostly misunderstood it. No matter the language we used, they mostly heard, or chose to hear, theatre. For them, creativity was strictly arts-based, and expression meant repertory work, and the star turn, but, for a few glorious years, about half the program’s tenure, the stars aligned for a forward-thinking university program.

**The Reflective Practitioner**

At the end of each academic year, I reviewed my work, reflecting on what students had brought to my attention about the creative experience in order to adjust the curriculum to better meet their needs and expectations. In a parallel fashion, this paper made me reflect upon the longitudinal development of my creative practice, the different processes involved in a creative experience, and the research pertinent to my quest for a broad-based practice. The analysis of my journey, a reflexive/narrative autoethnography of a 24-year linear journey, illustrated observed actions and behaviours, which enabled me to find the golden thread, the weft of my journey, connecting the elements into the greater picture.
Philosophy and Unique Orientation of the *Arts d’expression* Program

The program proposed reaching its objectives by adopting a vision based on creativity by promoting collective creation, implementing a program that relied on research-based brain function, and facilitating a multidisciplinary and transdisciplinary approach. Multidisciplinary projects, in collaboration with multicultural organizations to create a cultural Internet, aimed to explore the relationships among art, society, and new technologies through an evolutionary process of investigating new forms of expression. The projects contextualized the potential of lateral thinking, and the creative arts, by integrating them in all subject areas alongside technology.

Print and virtual media were exponentially describing society’s urgent search of flexible thinkers and creators, and since business was for the most part driving the urgency, I thought students would quickly adopt technology, though this brought on its own set of problems. Using the Internet with a creative, and indeed a higher purpose, would enable them, I thought, to discover the new patterns, aesthetics, and forms of creativity in the evolving relationships among art, society, and technology. Young artists needed to understand how technology was hybridizing the arts. New tools, and ease with their manipulation and evolution, would allow them to pursue viable careers from a perspective that encompassed it.

Inspired and influenced by my prior experience with collective creations, training in a traditional theatre setting, as well as various experiences in professional acting and directing, I knew that instilling creative practices in students would involve multi-layered steps, so the program’s purpose was eminently clear. Though theatre was the favoured platform for exposing a student’s success in handling a production, it was the process of thinking to create, and creating to think, which drove the program. Not all elements were implemented, as the groundwork required to achieve the first successes took far longer than I had originally thought, but they are still the benchmarks, which I still hope to achieve in the right circumstances.
Shaping a Creative Journey: Conceptual Framework

Opening student’s minds to the breadth of possibilities drove the program’s conceptual framework, and rested on three overall guidelines: global characteristics, specific characteristics, and innovative pedagogy, each with its own priorities. Once again, these were benchmarks, and not all were reached, though my pedagogical practice moved the students forward, as far as they could, or would go.

**Global Characteristics.**

The program prioritized stimulating students’ creative potential through an innovative approach that aimed to develop flexible thinking and positive self-management during times of change. Students worked with various media to extend their range of expression, and the ability to establish new links to master the interdisciplinary approach. Based on current trends that characterized the ability of individuals to adapt quickly and effectively to the modern world’s shifting paradigms, the program sought to empower students to participate in this change. The program was groundbreaking, because its inherent pedagogy emphasized flexibility in the creative process to instruct innovative individuals.

**Specific Characteristics.**

The program’s pioneering creative and interdisciplinary approach allowed it to stay abreast of change, and in harmony with its clientele’s changing needs, which stemmed from an increasingly complex society, interconnected by technology, and influenced by globalization. Balancing practical and theoretical work was key; the integration of interdisciplinary and experimental research laboratory sessions encouraged students to explore theoretical and practical tools to find their voice and creative style, while collaborative and positive teaching style allowed for the development of creativity.

**Innovative Pedagogy.**

Innovative teaching strategies and a modern pedagogical practice enabled students to reach the learning objectives, and assimilate the theoretical components through dynamic and creative exchanges during traditional face-to-face sessions. These classes were left of centre, though, in that innovative teaching strategies were favoured, which balanced theoretical and practical work.
Each course had a practical component with games, simulations, and techniques that promoted learning by doing. Experimental research laboratory sessions allowed students to work on experiential collective creations, so they might discover their voice and passion, and the perseverance and determination to nurture an idea to fulfilment.

Decompartmentalizing the classroom meant community-based learning opportunities, involving innovative learning projects, which enabled students to experience a reality outside the cosy confines of the classroom. Contextualizing learning projects enabled students to better define a career path, and explore their personal potential to its full measure. Decompartmentalization was not innovative of itself, but the focus was not as expected. Students were expected to take control of a project, not just be an adjunct. For students who still understood the program to be strictly arts-focused, going beyond the perimeter they had self-imposed, and which frankly, was imposed by arts-based partners, breached their star-driven ego.

The artist-in-residence component was fresh, in that people came in with a host of experiences. The consultants’ reflections powered different perspectives on theatre theory and practice, and their services, which ranged from a lecture to an extended run as a part-time staff member, allowed students to optimize their training with professional advice, network with francophone creators who were in the field, and pinpoint how arts-based training could become a springboard to other careers.

The philosophy and foundational design of the program established, and the parameters within the program set to permit continual assessment student development, curriculum content was next on the agenda. The program focused on both theoretical and practical work. The creativity courses presented the philosophy, while *La Troupe* was the practical laboratory setting that allowed students to put theory into practice by participating in collective creations.

**Establishing a Practice of Interdisciplinarity: Operacy**

The creativity courses may have been the core of the program, but the practice of interdisciplinarity fleshed out the program’s vision. Courses plugged into one another; no course was a standalone. Additionally, each course had three distinct components that established lateral thinking as the program’s method of operacy.

The courses were designed to help students acquire the attitudes to exploit the potential of creative thinking, in essence, the perceptual logic of self-organized information systems that designs and operates schemes.

Methodological Tools and Techniques.

The courses were designed to help students master the skills of creative thinking by means of a structured process, without which it is non-operational. (Regardless of the intrinsic power of the techniques, their effectiveness depended on one’s choice to implement them.)

Practical Applications of Creative Thinking.

The courses were designed to help students apply creative practice in actual milieus to introduce, or use, creativity in different contexts. Lateral thinking techniques and tools put into practice to generate ideas and innovative concepts went beyond the classical thinking process, which is based on argument and confrontation, toward a more cooperative and positive exploration of an idea. Changing perceptions and concepts was the substrate upon which the students used the creative process to generate new ideas and new concepts. Each course included a creative learning project, created in collaboration with various community partners: school boards, hospitals, children’s service agencies, Science North, professional theatres, and government organizations to enable students to apply creativity within a real context.

First-Year Courses.

Developing the culture of lateral thinking in students enabled them to accept the notion of similar perceptions with dissimilar definitions to forge new links among the given elements to generate new ideas and new concepts. This mindset predisposed them to better understand the first principle of interdisciplinary practice: integration. Being intellectually provoked by people in other fields of study stimulated them to go beyond their pre-conceived notions, the reason why introductory courses in theatre, visual arts, music, dance, and film were introduced.
Second- and Third-Year Courses.

Additional courses in stage arts (stage design, costumes, scenery, makeup, and stage management), technology (sound, lighting, arts-specific software, and special effects), acting, nonverbal communication, directing, and classical movement, widened students’ theatrical expertise. Though still focusing on the creative process, training in the various specializations was important to the learning process of interdisciplinary skills, because students had to think about the arts as an interconnected system. Skills transferability was the goal.

A second-year conceptualization course and a third-year creativity course provided flow among components, and interdisciplinary practice. The conceptualization course introduced the second principle of interdisciplinary practice, in essence, collaboration techniques among the various disciplines. Students developed skills and attitudes, enabling them to conceptualize an interdisciplinary project while working with partners from different areas, thus acquiring the tools to guide an interdisciplinary team.

The creativity course introduced the third creative principle of interdisciplinary practice, synthesis, or discussion and reflection. Each student identified a business, an organization, or a community institution, unrelated to the arts, to then actually create and implement an innovative interdisciplinary project. Contextualizing the interdisciplinary practice outside the program’s framework enabled students to reflect on the real value of interdisciplinarity. Following their work in the community, students reflected on their practice from a creative and interdisciplinary perspective.

Fourth-Year Courses.

In the fourth year, two courses, one in arts management and the other, in portfolio documentation, aimed to prepare students for the reality of the labour market. The final courses, one in creativity and the other in production, challenged students to apply their grasp of the principles of creation and interdisciplinarity, in having to write and produce a show to thus reflect upon their journey.
La Troupe: A Laboratory for Serious Play.

The program-wide compulsory *La Troupe* course, and the fourth-year Production course, enabled students to contextualize the theoretical concepts of creative and interdisciplinary processes, and move them beyond abstract and symbolic reasoning. Students were expected to experiment with ideas, and create theatre, not only produce it, and design it, not only interpret it. Sensemaking was the goal. In principle, students would engage in ideation by learning to take control of the creative practice.

The *La Troupe* course applied the creative process: preparation, incubation, illumination, and realization, and the principles of interdisciplinarity: integration, collaboration, and synthesis. It gave rise to collective creations in which everyone participated to conceptualize and implement the various aspects of an interdisciplinary performance. It contextualized theoretical learning, aimed to develop the capacity for analysis and synthesis, required students to question choices, and demanded an original approach to the work, involving several solutions and leading to an integrated knowledge base.

In an ideal world, students would choose a research path that kindled the team’s interest and curiosity, engaging it in the exploration, reflection and work required to stimulate creativity and discovery. The collaborative work required among teachers and students would redefine work process, test teamwork, join theory and practice, and promote team teaching, thereby providing contrasting viewpoints.

Content Orientation of the Creativity Courses

When first considering the program’s orientation, researchers who believed creativity centred on an individual mind influenced me. In fact, advocates at early Creative Problem Solving Institute (CPSI) conferences I attended held heated debates over the issue. What was important, however, was the debate.

The initial design of the creativity courses, aimed at implementing the best creative practices to develop students’ creative potential, was supplemented by a continued practice of the different processes that students would display as they engaged in the practice of creative collaborations. The focus on practice helped define the conditions that fostered the emergence of creativity. I
modified and added elements to the creative practice, students’ responses highlighting areas to improve, but it was an ongoing process, and only time could resolve issues as they arose. I knew that my venture with creativity would involve an ever-evolving practice, and that continuous study and research would be crucial to ensure that the program moved with the changes technology was influencing.

The renewed interest in creativity research, and creative thinking, lay with Osborn (1993) who reported the lack of research in the area in the 1940s, and Guilford’s 1950 “address to the American Psychology Association as a benchmark to identify the beginning of modern creativity” (Murdock & Puccio, 1993, p. 251). From that point, literature revolved around understanding the singular mind, and the developmental background and careers of eminent creators to further human beings’ understanding of this emerging discipline. In fact, early support material at CPSI, like its strategies and tools, aimed to develop the creative powers of the individual mind.

When I started attending CPSI conferences, however, deliberate creativity development was in an effervescent phase, exploring how to systematically stimulate and nurture creative productivity in oneself and others. Over time, the systems theory of creativity, which made its way onto the research scene, drew much attention. I welcomed the theory’s promise, as it resonated much more closely with my cultural experiences with creativity. I became acquainted with Csikszentmihalyi’s (1999) systems theories approach, which presented creativity as an interaction between the individual and the outside world, thereby introducing a new model of creativity as an “interaction between person, field and domain” (Csikszentmihalyi, 1999, p. 315). Csikszentmihalyi argued that psychologists tended “to see creativity exclusively as a mental process”, and proposed that such an approach could not do “justice to the phenomenon of creativity, which is as much a cultural and social as it is a psychological event” (Csikszentmihalyi, 1999, p. 313). While assuming one could understand “creativity with reference to the thought processes, emotions, and motivations of individuals who produced novelty”, he argued that the “individual mind was not sufficient to explain the creative process” (Csikszentmihalyi, 1999, p. 313).

Interestingly, years previous, Morris Stein, whom I met in my first years at CPSI, had also emphasized the import of social forces on the creative process. His work greatly influenced me
in situating collective creation at the program’s core. Stein (1974) bemoaned that many thinking about creativity limited “themselves to the creating individual” (Stein, 1974, p. xii). While his approach placed “the creating individual [at] the center of attention” (p. xii), there had to be more than one person involved. Stein contended that an individual had to create in a social context, “thus as affecting and (...) affected by the persons and social forces in his environment. Stimulating creativity, therefore involve[d] not only stimulating the individual but also affecting his social milieu and the people in it” (p. xii).

If those around the creating person do not value creativity, if they do not provide the necessary supportive environment, if they do not accept the creative work when it is completed, then it is likely that the creative individual’s efforts will encounter serious if not insurmountable obstacles. Since creativity is a process, it is necessary to keep in mind not only the creating individual but also the direct and indirect forces in the social environment that affect him. Knowledge of such forces, in addition to what I can do to help the creating individual, can also be used to stimulate creativity further. (Stein, 1974, p. xii)

I was also drawn to Amabile (1987; 1996), since her interest in the “characteristics of creative individuals evolved to a closer examination of creative situations” (Amabile, 1996, p. 5), and the importance of understanding context in which creativity emerged. Amabile (1987) drew attention to the importance of the effect that the “individual’s perceptions of environmental factors have upon their eventual creative output” (Amabile, 1987, p. 256). And, while recently researching material for an introductory course in psychopedagogy I will be teaching, I discovered Smolucha’s (1992) article on Vygotsky who also emphasized the importance of social forces on the creative process, and contended that creativity, like other learning, emerged through interactions with other individuals. Vygotsky had argued that, like electricity, creativity was “not only present in a magnificent thunderstorm and dazzling lightning, but also in a lamp, (...) and exist[ed], not only where it create[d] great historical works, but also everywhere human imagination combine[d], change[d], and create[d] anything new” (Vygotsky, 1930/1967, cited in Smolucha, 1992, p. 54).

I shared great affinity with the emerging systems theories of creativity; in retrospect, this orientation underpinned the many challenges the program would routinely face. My experience
with creative collaboration, however, still indicated that my search for understanding creativity and its processes was incomplete. Only time, further exploration and experimentation with the process with my students, and continued development of practical tools and strategies to meet the challenges of creative collaboration, would answer my questions.

**Coining Definitions: From Collective Creation to Creative Collaboration to Systemic Creative Collaboration**

According to Mayer (1999), researchers “endorse[d] the idea that creativity involve[d] the creation of an original and useful product” (Mayer, 1999, p. 449). As such, the working definition of creativity I introduced to students was the ability of individuals to create new combinations using existing elements: words, materials, sounds, ideas, feelings, etc. Embedded with this notion of creativity was efficiency, so awakening the ability to create enabled people to bring creative and effective solutions to problems they were facing, and produce novel ideas, creativity rendering the unconscious and intuitive into something communicable. The first part of the definition I introduced, therefore, promoted creativity as an intellectual function, thereby identifying the cognitive processes underlying creativity, and the idea that it involved the creation of an original and useful product. I added a component to the definition, however, cognition alone unable to explain creative productivity.

This addition to the definition resonated with me, my background in the arts and sciences not letting me adhere to one more than the other. My scientific background supported the idea of creativity as a cognitive process, behaviour in part explained by conscious learning through experience, but my training as an actor did not allow me to deny the role of intuition in the process of creativity I had experienced. I began to question whether intuition, that mysterious subconscious force a society steeped in logic was denying, was, in fact, a deeper awareness to develop, like the training in acting had pushed me to explore other depths of my mind, body, and affect. As students came into the program over the years increasingly dissatisfied, confused, and disaffected, I would reflect on how to resolve the conflict.

Consequently, we would consider both the affective and cognitive components of creativity in class, from identifying personality traits to motivational characteristics, and reflect on the role of intuition, thereby exploring various viewpoints and theories on creativity. However, while the collaborative context fuelled creativity, I still spent a great deal of time in creativity classes
developing the individual mind for the process, until my practical experiences with group creativity stirred my initial convictions, the interactive process among students giving way to new observations into the creative process.

I adopted Rhodes’ (1961) 4 Ps model – person, process, product, and press (environment) – as a conceptual framework to guide creativity research, since it provided the necessary “contextual criteria as well as multifaceted phenomenon”, using its guidelines and parameters to teach “the multi-faceted complex nature of creativity” (Murdock et al., 1983, p. 257). Its theoretical framework was “sufficiently flexible to take into account a variety of approaches for the study of creativity, yet sufficiently structured to allow for ease of communication” (p. 275).

Classes explored the obstacles, or inhibitors, and favourable conditions from the social, political, educational arenas to the mechanisms of the mind. I provided students with resources that addressed these issues: Stein, Amabile, Sternberg, Isaksen, Aznar, Cusson, Demory, Cossette, de Brabandere, Murdock, Parnes, Firestien, Treffinger, de Bono, Simonton, Bailin, Rapaille, and Csikszentmihalyi, and so many more. Nothing, from historical perspectives on creativity, to evolving theories from various fields like psychology, physiology, sociology, anthropology, and neuroscience, were out of bounds.

On a practical level, I presented the classic Wallas model of the creative process – preparation, incubation, illumination, and verification – as an ideas generation organizational method, and introduced students to deliberate methods, techniques, and procedures to stimulate the “incubative activity and thereby increase the probability of “ahas” occurring more frequently” (Fraley, 1997a). A brochette of tools, techniques and methods to stimulate creativity, ranging from Osborn’s (1993) brainstorming techniques, to Gordon’s synectics (1971), and de Bono’s (1970) lateral thinking techniques to name a few, were put into practice. With the content parameter established, other elements like the progression of the courses, and learning objectives, had to be addressed.

During the First Wave (1993-2003), the term, collective creation, in its traditional definition, was appropriate, the productions typical of a cultural collective identity affirmation orientation. During the Second Wave (2004-2006), students, no longer willing to strictly interpret text, started shifting toward creative collaboration by writing their own text. By the Third Wave
(2007-2009), students had transitioned into what I coined, systemic creative collaboration. Cultural identity still had a place, but global identity started taking precedence.

I submit that systemic creative collaboration is profoundly anti-hierarchical. Students were angry, perhaps despondent, about where the world was going. Though intoxicated by what technology allowed them, there was a disconnect between human potential and machine intervention. With technology pushing a ferocious consumerist society to the forefront, and economic ideals prioritized over humanistic ideals, human values of empathy suffocated, fostering self-centred egotistical individuals. The Third Wave students pushed back, questioning everything. This, of itself, was never the issue. The issue was a hybridized person, a student caught within the power of the machine, without the affect to understand consequences. Inspired and influenced by my training and professional theatre practice, and my prior experience with collective creations, however, I knew that to implement creative practice with my students, I would have to guide them through different phases.

**Phase 1: Visualizing the Creative Journey – An Invitation to Play in the Mind**

I always told students a story during the first class to help them visualize the nature of creative thinking. In the broadest sense, I was explaining that creativity was learning to think in a different fashion.

Imagine planning a holiday somewhere you have never been. You’re excited. You’re breaking away from your routine repetitive life, and exhausted, but ready to venture into new territories to revitalize and refresh your energy. You’re keyed up, since you’re breaking away from the monotony of repetition to venture to a place you have chosen to make you feel good: warm weather, great tourist attraction… anything goes.

Creative thinking is all about the journey of what can be, rather than what is. It’s a wonderful journey. Make it into the holiday you want. You can explore a vast unknown territory, or a smaller unknown one. You can even cheat, and explore previously visited places. You can go to areas that are very different from what you know, or visit areas that have some similarities to home. Remember that the quality of your journey in developing your creativity will depend on your enthusiasm, your attitude, your curiosity, your
determination, and your energy level; in other words, what you put into it will determine your adventure’s outcome.

Of course, like any journey into unknown territory, you must be prepared, and that’s why I’m here. In fact, your journey will be an adventure. Think like Indiana Jones, as we look into the future, and seek to find the path that will lead to the most fantastic of adventures. Yes, the path will be mined with booby traps, your brain’s way to scare you away from discovering what it thinks are potentially dangerous buried treasure to your well-being. But, don’t worry. I am here to give you the hints you need, tools and strategies to help you recognize the mind’s booby traps. Remember that if the brain tries to scare you off, it just wants to protect you. It will incessantly try to deter you from your journey of wild exploration. However, with a monk’s patience, you will master the tools and attitudes necessary to think as an explorer, as well as become hypersensitive and magnetically receptive to your environment. You will be able to monitor the landscape of your mind that leads to the discovery of buried treasure, those aha moments of ideas that will also help you discover more treasure with the help of your peers: the mastery of the art of creative thinking.

The story, which illustrated that creative thinking differed from logical thinking, aimed to raise students’ awareness on how thinking about thinking would develop the necessary skills and tools for them to define their future. Since their educational development had emphasized knowledge of a particular reality, rather than an understanding of the interactions and interdependencies between all aspects of reality, I guided them by giving them parameters (focus and stimuli) to work through the various processes needed to shape a creative attitude, and use the creative aptitudes (skills, methods and strategies) needed to move forward the creative collaboration. So, as my interplay with students began, I focused on their exploration, learning from them, and with them.

**Phase Two: Collaborative Play**

A safe and positive creative environment, which fostered collaborative work, and created the environment required to access creative thinking strategies, was imperative.
Serious Play: Learning to Connect with Others.

When students brought their stress and worries with them into rehearsal, the group’s time together was derailed. If they focused on outside influences, little work was accomplished, both mind and body too wound up to let go. The minute I asked them to play, they would smile, ready to let everything go. Play was a moment of bliss in which they could let down their guard, drop their masks, and accept themselves and others, while maintaining autonomy.

With their senses more acutely aware, freedom and possibilities presented themselves. There was no greater way than play to foster cooperation, sharing, give and take, personal commitment, and attention to others, which created a bond among them, the necessary ingredients for successful collaborations. As the body shed its immediate stress, breathing would subside to deep inhalations and exhalations, leaving a freshly oxygenated mind more alert and focused. The group was ready to engage, and break down the walls to move into more personalized communication, the best dynamic to feed a good creative session, and since the energy flow was high, positive, and expansive, and the group trusting, ideas would flow.

Pushing Connectivity to Another Level: Movement, Breathing, and Imagery.

I would then lead the group in a physical training session by which breathing and imagery exercises improved body alignment in a dynamic way. Negative emotions and stress influencing faulty postural patterns, mental training through visualization was important to help remediate negative physical changes, and induce an overall lasting effect. My professional training had taught me that, with a clear purpose, and positive imagery while working on movement, the body released unnecessary tensions. In fact, learning to work on that level of integrative thought of mind, body, and affect through imagery, emotional and mental stressors released, making room for newly available energy to foster creativity.

Movement developed more suppleness, flexibility, and sensitivity to become more transformable and expressive. The point was not to train dancers, but rather an opportunity to master skills leading to creative freedom by raising awareness of how the body worked, thereby increasing its articulation to promote a more detailed physicality, and a greater sensitivity to stimuli. Actors, as well as good collaborators, need to be sensitive to each other’s energy to generate varying intensities among them, free emotions, and intensify action on stage to maintain and support the
collective energy that creates rhythm and interest for an audience. As Barba (1993) opined, training was a “process of creating a bridge between energy and consciousness, between states of intensity and states of consciousness, in other words between energy and awareness” (Barba, cited in Christoffersen, 1993, p. 184).

From solo to collective exercises, the group would become aware of energy flow, and how it could be channelled and interpreted to feed off of each other’s energy to create complicity, that charismatic energy flow between two or more individuals, or be open to another’s wavelength to feed on each other’s ideas. Their journey, understanding the potential of nonverbal language in which human bioenergy was its vocabulary and images were the stimulus to shape them in poetic communicable phrases, was beginning.

The Newtonian Model.

Firstly, the foundation of the worldview underlying Western science, in place for centuries, relied on the principles of “scientism” (Appleyard, 1992, p. 18), which was committed to the teaching of the classical, or Newtonian model of reality, to explain how the world works. “[M]echanistic, [and] built around the model of the world as a machine, with rigid laws of cause and effect” (p. 20), it stipulated that if knowledge was not rational, quantifiable nor verifiable through the physical sense, then it was not real. Its founding tenet focused on the physical world in which “only the tangible, material universe is real” (p. 21), allowing the idea that reality was the material cosmos.

Secondly, its “reliance on reductionism” (Davies, 2000, p. 6) as a research methodology meant utilizing analytical techniques to solve problems by reducing them to their constituent parts to understand the whole. As such, reductionism tended to study each component of a system in isolation. However, as Barlow (1992) contended, reductionism “ignores the principle of holism - which states that complex living systems (...) are more than the mere sum of their parts (... and) have “emergent properties” like coherence (... and) interdependence (...) that reductionism fails to consider” (Barlow, 1992, p. 188). Reductionism, which had shaped our mindset, was a materialistic worldview, which ran counter to imagination, intuition, ideas, values, emotions, creativity and aesthetics, those intangible realities used to express human experience that cannot be measured by ordinary means, or mathematical treatment. Under the Newtonian worldview, we were forced to coexist within a fragmented reality, which had an inherent tendency to
segregate rather than integrate, a belief that not only denied the full range of human experience, but human agency. Hence, we were moving to a new worldview of interconnectedness.

With this in mind, our present worldview, which had pushed aside emotions, was not longer valid, for, as Damasio (1994) pointed out, emotion was integral to the processes of reasoning and decision-making. He called attention to patients with brain damage in the areas of the brain that integrate the emotional and cognitive systems who could no longer effectively function in the day-to-day world, even though their mental abilities were perfectly normal. He argued that emotion could no longer be pushed aside without interfering with nature’s intention, the attainment of a person’s greater potential in which “emotion assists reasoning when it comes to personal and social matters involving risk and conflict” (Damasio, 1994, p. 100). He concluded that selective absence of emotion was problematic, and well-targeted and well-deployed emotion was the bulwark, which supported proper reasoning. To dismiss emotion, he said, and to treat it as an unnecessary evolutionary appendage was questionable, emotions being the embodiment of the logic of survival.

Paradigm Shifts in the Making.

This phase focused, therefore, on raising students’ awareness on how to think about the self as a whole, as society careened into a new era in which a new worldview of interconnectedness was replacing the Newtonian fragmented worldview. Scientific theories, principles, rules and laws formulated into worldviews were actually “creations of the human mind; properties of our conceptual map of reality rather than of reality itself [and] are necessarily limited and approximate explanations of nature” (Capra, 1996, p. 317). As humans’ inquisitive minds propelled them into a relentless pursuit for knowledge, and a deeper understanding of life’s puzzling mysteries, scientific theories were elaborated, then eventually overthrown as problems with the theories were discovered but, more importantly, as new answers were revealed, “recognition that nature has somehow violated the paradigm-induced expectations [leading] to re-examination of the accepted paradigm” (Kuhn, 1970, p. 52). As a result, the interpretation given to new findings translated into a totally new way of seeing the world. This paradigm shift altered beliefs and preconceptions, unalterably restructuring how individuals did what they did.

The accelerated rate of technical progress, which led to the high-tech revolution attributed to Kilby and Noyce’s discovery of the silicon chip in 1961, was the “single innovation [which]
continue[d] to rapidly advance our technology” (Small & Vorgan, 2008, p. 12). Consequently, the Newtonian model, which had dominated Western scientific worldviews and culture, was being challenged by new theories fuelled by the technological revolution, a paradigm shift in the making. The “well-established framework (…) no longer adequate in explaining anomalies in nature [was creating] a crisis […] and] crises are a necessary precondition for the emergence of novel theories” (Kuhn, 1970, p. 77). A new worldview was emerging.

**Phase Three: Learning to Move with Change – Transformative Ideation**

The next phase of rehearsal involved experimenting with the tools, skills, and attitudes taught in the creativity classes to support the creative process by exercising the power of the imagination and visualization skills, the central tools toward improving artistic ability and creative thinking. In keeping with a climate in which judgment and criticism were set aside to give freedom of expression during the exploratory stage, the approach revolved around both physical and verbal improvisation to arrive at a script. Intended to be an audacious exploration of theatricality bent on discovering a new aesthetic, and redefining theatrical practice, it also organized the creative process, relying on an egalitarian dynamic in which all participated in the writing of the production, and shared responsibility for production tasks.

Commitment to a perpetual state of discovery was the key; students had to engage in creative exploration by completing different tasks or exercises devised to test ideas. These tasks ranged from exploring a character’s energy and tension, and the different chemistry between actors, onto objects that led to movement and character development. Prepared improvisation sessions during rehearsals also pushed certain concepts farther, as did exploring one’s physical dialogue to give rise to an interesting theatricality. Continuous redrafts ensured action before text. Rehearsals were never less than dynamic, a process I do admit frustrated students whose logic demanded patterns be set, though in retrospect, they would usually acknowledge the production never levelled.

**Research: A Collective Responsibility.**

Research was a collective responsibility: the stepping-stone to good theatre. The starting point could be anything: a character, a theme, a concept. Research, transposed into theatrical ideas, was the initial stimulus that sparked a company’s interest, its intrinsic motivation. The fragments
of exploration were scrutinized, some were temporarily set aside, while others were developed, but none were initially discarded. This phase of exploration, the incubation process, moved in chaos, and was a necessary gestational period that avoided premature decisions, which overlooked the hidden potential of unusual relationships, and different connectedness.

The phase, paralleling the creative process’ intertwined and spiral movement, allowed students to choose a direction that better stimulated the group’s interests, and engaged it in the required reflection to select a situation, or problem, whose exploration stimulated creativity and discovery through the physical and verbal improvisation that generated the script. The process was organic, not chronological, since brainwaves move the creative process, not predetermined outcomes. Once the parameters were established and a clear sense of purpose given, exploration took different paths, though ideas met at the intersection of the desired destination, assuming the will, determination, and motivation to meet remained central to any creative endeavour students undertook.

All students participated in La Troupe, the practical lab that provided them with a myriad of opportunities to assimilate the creative practice, the balance between theory and practice to develop, as de Bono (2006) coined it, their operacy skills. “Schools are involved with literacy and numeracy. They should also be involved with operacy, which is the skill of operating, or getting things done. In the real world, that is almost as important as literacy and numeracy” (de Bono, 2006). Furthermore, students would transfer the principles to which they were introduced in the more traditional domain-related classes to test and experiment with them. Experimentation in all art-form genres was welcomed, encouraging multidisciplinary creations by using visual arts, music, film, dance, and technology (virtual theatre). The program was moving toward a more expansive exploration of theatre, a true cultural mix, the better to shape students’ minds in becoming future-thinking 21st century creative designers, whether in the theatre, or another area, to develop autonomous theatre-makers, not theatre-replicators. The final outcome depended on the results of this developmental process. The objective is to have the audience live an experience.

**Reflection.**

This phase focused on raising students’ awareness on how thinking about affect to develop better skills to harness emotions could open their minds to other ways of solving conflict that did not
involve competitive thinking, but rather, constructive thinking. During this phase of group exploration, I emphasized the importance of the positive work climate needed to foster creative thinking in each other, referring to the scientific theories that explained how the mind behaved in a negative or threatening environment, a major obstacle to the creative process. In fact, all our experiences are monitored for danger, the brain’s main function to keep the individual alive and reproducing. As explained by LeDoux (1996), sensory signals go directly to the amygdala, by passing the sensory cortex before we are even aware, because the amygdala’s role is to continuously monitor our experience to see how things are. This “lower-route” (LeDoux, 1996, p. 78) begins to make meaning of our experience, before we have begun to understand it cognitively and consciously.

The amygdala, the fear, danger, or negative emotion centre, whose role is to make meaning of incoming information, ensures we react to bad developments. When it senses danger, it sends subconscious signals directly to the body. As LeDoux (1996) continued, these signals produce body language, and in extreme cases, may directly trigger body movements that can evolve into fight or flight responses, the first pathway basic emotions follow because its quick response ensures that we are protected. A second pathway further processes the stimuli, however, that leads to the sensory cortex, because the first pathway often makes mistakes in its evaluation. In the cortex, the situation is considered more carefully to conclude how real the danger is to the individual in order to determine the appropriate response to take. As Carter (2000) argued, “the connection from the emotional systems to the cognitive systems are stronger than the connections that run the other way” (Carter, 2000, p. 130). When students in a group setting felt threatened, therefore, their response was to shut down, making creation improbable.

**Phase Four: Learning to Deal with Perspective to Enrich the Ideation Process and Improve Thinking in Connectedness**

The fourth phase focused on raising students’ awareness of how another’s perspectives could fuel, rather than compromise, higher connections, enabling them to generate novel ideas. The intent was to dissipate a fear of change, and allow students to more confidently approach new ideas, thereby embracing connectedness, the cornerstone of perceptual thinking. Motivation and patience were important attributes during this chaotic phase, since the group would have to
contend with a multitude of perspectives, and learn to choose among ideas, while responding to the needs of an entire group.

Understanding how students’ minds functioned to improve their creative and critical thinking skills was key. Introducing students to de Bono’s logic of perception was a necessary tool for students. As de Bono (1992) explained, our society had developed many methods for processing information, but was lacking understanding about how ingredients were chosen.

The production of the ingredients for information processing is the role of perception. It is perception that organizes the world in the x’s and y’s that we then process with mathematics. It is perception that gives us the observations or propositions that we then handle with logic. It is perception that gives us the words and choice of words with which we think about anything. (de Bono, 1992, p. 57).

Misunderstanding perception, human beings had assumed that words could handle logic, which de Bono demonstrated was not the case, as creativity takes place in the perceptual phase, “where our perceptions and concepts are formed and this is where they have to be changed” (de Bono, 1992, p. 58). With perception, he argued, we do not “see the world as it is but as we perceive it. The patterns of perception have been built up by a particular time sequence of experience. We perceive the world in terms of the established patterns that are triggered by what is now in front of us” (p. 58). As such, learning to ideate through multiple perceptions was a valuable asset to students working in the creative process. This penultimate phase, ideation, or connecting the dots, raised students’ awareness on how perceptual thinking could assist imagination in developing strong, mental, and representational images that could prove beneficial in heightening and strengthening the ideation process for problem solving. They learned to think in systems, and detect connectedness, enabling them to more easily harness complexity.

**Phase Five: Dealing with Design and Collective Operacy – Moving toward Systemic Creativity**

The final phase’s intent, the production of ideas, was to afford the energy and creativity required to associate ideas. Its aim, the connectedness of the group as one mind, would propel the individual to learn through the collective, and the collective to learn through the individual. Each student, as an integral part of an interconnected web in search of meaning, would contribute to
find solutions. Commitment and intrinsic motivation would drive them to care and assume responsibility, with process, reflection, and respect, the ultimate personal and group goals.

Unfortunately, I did not reach the final phase in the conceptual framework; only initiating the first four phases’ exploratory levels, so much groundwork needed to reach students whose deep-rooted mindsets ate away at time. I will, however, later discuss my observations of the three generational waves of students with whom I worked, what parameters and stimuli I utilized, and what initial mindsets students had. I will also identify which facets of creativity, and which of the four phases needed the most focus to better assist them in the appropriation of the culture of creative thinking attitudes and skills, and the obstacles and problems in achieving the creative organizational system that fosters creativity.

**New Role for Educators: Guiding Challengers**

To teach the creative process utilizing this framework, and to maintain a holistic view on the process, I touched upon the phases weekly, so the process remained integral in students’ minds. It is important to remember that the aim of the framework was to emphasize connections and cohesion, rather than separateness and fragmentation, thereby helping students understand the culture of creative thinking, a right-hemisphere mode of thinking, which embraces holistic thinking. My pedagogical approach required fluid and flexible reflection to respond to change, keeping in mind that connections and cohesion must always guide choices to better dance with complexity.

I preferred to think of myself as a « Guiding Challenger », rather than a teacher, though I do not mean to slight who teachers are, as I am proud to be one, but the term challenged me to reflect on my role, which was to guide students through a process, and motivate them to become independent thinkers and doers. As a guiding challenger, I could not adopt a dominant stance, this being creativity’s fundamental enemy, dominance inviting complacency and passivity, disallowing a participatory approach to learning. I did not see myself as the bearer of truth, though I concede that professional expertise was required to take on the challenge of my pedagogical choice. Content, however, was not central, but complimentary, to the teaching of process skills.
My approach was certainly challenging. Great care was required to create a positive learning environment, the first step in teaching the creative process helping students undo embedded thinking patterns, so they could learn to navigate between thinking cultures. This method involved balancing theory and practice, and more importantly, instigating learner-driven projects connected to the community to initiate intrinsic motivation. Play, or active pedagogy, was central, as exploration, risk taking, and inquisitive thinking were central to creative thinking.

**Sidebar: Staying the Course**

What I kept close to me, as my mentors had taught me, was the vision I had in mind when I first agreed to embark on this adventure; in my case, a vision of empowering youth with tools enabling them to collaboratively shape a sustainable future. The vision did need retooling to stay the course, but the rudder was often unwieldy, and though the journey was exciting, landing the boat required swift course adjustments. A crash, or two, was inevitable. When issues got muddled, the flotsam of obstacles and resistance coming my way, I would close my eyes, and find my compass, the original purpose to which I adhered, and to which I still adhere, because its aim was true. All I wanted was to foster growth. Along the way, I discovered that my safe place, the one that centred me, that reinforced the focus of my work, was with children, either my own, or those with whom I worked.

To re-energize my spirit, I volunteered in elementary schools, offering theatre workshops, several times a year. I would put on my court jester’s costume, and play, play, play! It was wonderful. We laughed, were silly, and ran riot, but mostly, we enjoyed each other’s company. Playtime was the only time in which I could let go of unimportant “things”, and focus on what was truly important: connecting deeply with someone.

Children have not forgotten; adults have. Looking into a child’s eyes, giving myself permission to momentarily leave behind the artifice of adulthood, and lingering in a child’s generosity to give and connect, transcended everything: pain, anger, confusion, betrayal – that, oh so adult, emotional baggage. I would leave a school, re-energized, once again ready to move forward to contribute in empowering youth, remembering the purpose of my vision. I could then repeat my mantra to cleanse my spirit: “To those who tell me that my goals are idealistic, impossible, or flights of fancy, I no longer give credence. I believe in youth, and will continue to move forward
with them, with or without you. I will no longer spin in your vortex of self-interest. I will be constructive.”


September 1999 crowned a banner year; the full program was now on the university’s calendar. The first cohort, whom I now call, The First Wave, straddled the years between those students, members of the rebirth of *La Troupe* for whom no course credits were granted, those who finally profited from the granting of a 6-credit course, and those who would benefit from a baccalaureate program to become its first graduates.

The Pre-Program refers to those students who were members of *La Troupe*, and did not necessarily register in the program in 1999. The Post-Program Group refers to those students who registered in the program when Laurentian University duly accepted it as a baccalaureate program, and in so doing, became the first students in “The Great Creative Thinking Experiment” that was the *Arts d’expression* program.

The Pre-Program Group: 1993-1999

The Pre-Program Group was generally composed of two types of individuals who were attracted to the experience for different reasons. Some students were studying in various subject areas, and whose motives to join *La Troupe* stemmed from a desire to venture into the collective creation experience, having experienced it somewhat in high school. Others needed to express either a mostly unexpressed creative side, thinking they were not sufficiently talented to venture into the arts professionally, or forbidden by their parents to pursue such a “dead-end career”. Others were simply curious to see what it was all about, unsure about what career to pursue, and in need of an outlet. There were, of course, the artistic students, who dreamed of having a career as artists.

They were all, though, essentially in search of a venue to express a creative inner passion bursting to break out. For them, *La Troupe* was a safe haven, and from the moment they stepped into the auditorium to the moment they left, they never stopped creating music, poetry, dances, and songs in French, the language of their soul and spirit. They loved to explore everything. In fact, their high energy and exuberant enthusiasm quickly spread among the group, this energy, most conducive to creative exploration.
A Visual Memory of the First Wave.

The joy of being able to create together was immensely important to this generation, that even after many hours of rehearsal time, not having had enough, they would easily convince me that gathering in a more informal family setting would most certainly inspire their creativity even more. My family would happily welcome twenty or more youth in our home. And, once again, the moment they walked in, guitars, pianos, harmonicas, bongos, spoons, accordions, and sticks (no stones): everything and anything that made noise would come out. Ah, and the songs! Traditional round songs, classics and mash-ups of country, folk and rock, and original work would resonate throughout my house, joyful rhythms all, accompanying happy dancing feet.

I still see my children, just toddlers then, dancing and singing at the top of their lungs, my son giggling because of the doodles being drawn on his diaper, and my daughter jumping from one bean bag to another, to engage in conversation with them. They ran around, hugging everyone, because they felt special, with each student taking the time to play with them. In fact, my children dreamed of them coming over, and always asked when they were coming back. My husband watched this wonderful creative and dynamic energy fill our house, and smiled, happy to welcome and feed them. I swear they never tired. I always had to tell them to go home. They would, but not before cleaning up, thanking us millions of times, and making sure everyone had a ride, singing and hooting all the way.

I do stress that who they were, and how they behaved and enjoyed themselves, were familiar to me, our backgrounds similar: Catholic French-Canadian working class, imbued with a strong oral culture. They were givers, connected to their community, and in their presence, I could feel their affect, and generosity toward others. They still carried their parents’ values with them: discipline, obedience, sharing, and respect for authority, but freshly dug signposts were warning me that change was afoot.

Though computers had been in schools since the mid 1980s, they were still not part of everyday life, the Internet was a sleeping giant, and machines were either too expensive or with too few applications to appeal to the masses. Technological innovation was in its infancy, but by the mid 1990s, mass commercialization of the Internet moved technology firms to market cheaper user-friendly machines. Youth, always the first to adapt to change, started exploring a vast world. I do
not presume to be a visionary, but I did know had to prepare them for whatever was waiting in the wings.

**Setting the Parameters**

**The Focus or Guiding Thread: Stimuli to Activate Intrinsic Motivation.**

If this generation were to find its voice, its youth needed to acknowledge past generations’ efforts. They needed to know about the builders and visionaries who could inspire them to follow their dreams. As such, the content for the First Wave was predetermined; as a group, we would research Franco-Ontarian icons who had beaten the path, and “create” a play about their journey.

This choice of stimuli to get students involved, engaged, and enthusiastic about the journey was amazing. They embraced the spirits of the past, and fed on them. It made them feel they had roots, and that they mattered. In fact, we had many long informal conversations and discussions about our past, our culture, and our struggles, and how they wished to participate in building a better tomorrow. These wonderful engaging moments not only broadened their awareness, but also developed the solidarity that would fuel their standing up to the university’s cadres to claim their rights for a French-language arts program when the institution wavered on accepting the program.

In fact, they never let up, so intrinsically motivated, they attended committee meetings with numbers on their chest to make a statement; they were not just numbers. They requested their voice be heard in any decision-making, their future at stake. They even instigated a debate with administrators on French-language television to make their point. Our joint efforts went a long way in making the program a reality, though their political choices were their own. Gravel and I had not prompted their actions, but understood we were right to believe that, with the right tools, students could empower themselves and face issues head-on, no whinging or back door summits required.

The poem, *Aller jusqu’au bout* [Stay the Course] (Dodson, Monette, Gravel, & Azzola, 1993), written during these heady times, says it all.

*Courir vers mon destin*

*Au rythme de mon cœur*
Qui bat la danse folle de mes passions

Aller jusqu’au bout
Et pas un pas de moins
Jusqu’au bout, jusqu’au bout

Avec tout ce que je suis
Et tout ce que je deviens
Je veux libérer ce que je tiens fermé

Laisser derrière moi
Une histoire à faire sourire
Laisser derrière moi
Une histoire qui inspire

[Running toward my destiny
To the rhythm of my heart
Which beats the mad dance of my passions

To stay the course
And not one step less
Until the end, until the end

With everything I am
And all that I become
I want to release what I hold closed

Leave behind
A story to make you smile
Leave behind
A story that inspires]

The poem is clear; this generation still held to, and was motivated by, the previous generation’s values system, by rallying to fight for a collective cause, the right to cultural expression. As such,
their identity was undeniably tied to a concern about each other’s well-being, giving them a sense of belonging and solidarity, which, in turn, fuelled actions painted with degrees of spirit, compassion and empathy, and a strong commitment to each other. The importance of connecting with the past, honouring those who had ploughed the way before them, was key, but rather than stand still in past action, they moved forward. To this day, many keep in touch with each other, and several have pursued a career in the arts, determined to pay it forward.

Reflecting on the Students’ Mindset to Foster Creative Thinking within the Practical Laboratory for Collective Creation.

It is important to remember La Troupe was a voluntary activity in the early days; there were no formal classes. Gravel and I taught them the necessary tools of theatre craft to feed the creative process in the time we had. To think about their delight still fills me with joy. They so craved opportunities and change, they dove into research: books, interviews, film, and music – no amount of work was too much. Once the parameters – focus, stimuli and intrinsic motivation – were established for the group, and the creative process set in motion, I paid close attention to the students’ responses to the “lessons” to better recognize the areas that needed more attention, and facilitate the appropriation of creative thinking’s attitudes and skills.

Learning how to Cultivate One’s Sensitivity: Being Open and Receptive to Others.

I began the travail de bedaine, or “autobelly” training, with them to fine-tune their internal dynamics in preparation for collective collaboration. These exercises, the game portion, were second nature to them; they were like Energizer bunnies with energy to spare, always willing to work with each other. As I created a safe environment by establishing the magic rules of no judgment and criticism in this phase, only exploration and experimentation, working collectively came easily to them. They already had their antennae attuned to give and take, to care for each other, to listen to each other, to support and encourage each other. No one was left knocking at the door; they knew how to nurture a positive climate, the attitude conducive to fostering creativity.

This generation loved gathering in a group and feeling connected, family values transcending selfishness. In fact, though they knew La Troupe would demand long hours, including a commitment to rehearse even during reading week, they were excited to spend time together.
They planned meals, so brought microwaves and fridges. They planned activities like “âme sœur” [soul sister] by picking a troupe member’s name out of a hat, cheerfully spoiling that person with heartfelt daily treats: an original poem, a sculpture of a miniature snowman, hints to a treasure hunt; they planned it all. It was their work ethic, though, which was most impressive. Commitment was each person’s middle name; each wanted the best show, but balanced the hard work by supporting each other through thick and thin, nerves inevitably frayed by the long hours and their academic work.

They could also concentrate, and had the patience and stamina to venture into intricate choreography and detailed work. As such, they brought self-discipline, perhaps a bow to their innate respect for authority, but rather, I think, a deeper regard for choices. Forewarned about the expectations, they had still chosen to participate, committed to being and feeling. If I were to choose words to describe this group, interactivity, collaboration, cooperation, empathy, politeness, respectfulness, appreciation, and enthusiasm easily come to mind. When it came to the physical training, however, it was another story. They did not lack for enthusiasm, but it was tempered by a wariness about their body and its physicality.

**Working on Deeper Connectivity through the Body.**

Through my training in acting, movement, dance, and mime, I knew body awareness enabled a person to focus more deeply into the self, becoming, therefore, more open and sensitive to the internal channels of energy available to connect on a deeper level with others, and as, such elevate acting skills. This generation had the requisite concentration level to attempt the physicality exercises, but the motivation was not totally there; mostly, I think, a socially-inflicted wariness about the body. The work was intense for many of them, but they valiantly pursued a “body connection”. I took note of their responses; realizing “body connection” would certainly not improve with future clientele. I again needed answers.

For many years, I had attended dance conferences like Not Just Any Body, theatre conferences like ATHE (Association for Theatre in Higher Education) to both learn and consult with my peers on this matter. In 1999, I discovered an artist who would help influence the future direction of my approach to movement, again in the spirit of helping collective ideation during the creative process. In a dance workshop I attended, A Global Conference to Advance Health, Well-Being
and Excellence in Dance and Dancers, Aminurta Kang (1999) talked about the unity of body, mind and spirit in dance, based on a comparison of Eastern and Western cultures.

He (1999) read a statement from an early description of dance that appeared in ancient Chinese documents, “When you are ill, use dance to cleanse yourself.” He explained that the origin and development of dance were closely related to the health of the human body and mind, and that cultural differences between the East and West were due to different views on the universe and life. In Western culture, he posited, the human being “is perceived as being at the centre and, from this centre, mankind is continuously searching outward to understand events and patterns. This is an expanding philosophical conception which has contributed to contemporary Western culture which is based on scientific humanism” (Kang, 1999, p. 1). In Eastern, or Chinese, culture, he continued, the human being “is perceived as an organic unit in the universe and, consequently, mankind tries to understand the patterns of the universe and the relationship between the world and itself. It is a cultural system that combines primitive simplicity and contemporary naturalism” (Kang, 1999, p. 2). He continued with his comparison by concluding that Western society had lost the connection with rituals and dancers performed to better others.

I concluded that Eastern cultures do art to find balance with nature, while Western cultures do art to give meaning to life. This definitely fuelled my reflection, as I felt that both were necessary. The idea of choosing one or the other bothered me. I could only think of how my students would find wider meaning, if introduced to both perspectives. I saw new challenges ahead of me. Before I could get students excited about deeper connectivity to help foster higher levels of creativity, I would have to work on their West-oriented mindset. I was not completely surprised, many students pursuing arts studies wanted to be stars, the Western equivalent of artistic success.

A professional dancer attending the conference added that Western dance also suffered a Western ideology with the choreographer as dictator, and dancers compromising their art to accomplish the choreographer’s vision. She ended by claiming that we should change that philosophy and allow dancers to say what they feel. I left the conference, feeling that the merging of cultures would definitely foster more holistic individuals. The ATHE conferences proved fruitful in my quest for different culture’s techniques, and I discovered new ways of assisting my student’s development towards a greater awareness of their body’s potential towards higher connectivity. In fact, I retain three important influences.
Firstly, I discovered the Suzuki Method of Actor Training. Suzuki’s techniques were designed to engender spatial presence as an actor’s primary action. Suzuki (1985) wrote, “There is no bad or good acting. There is only a variation of profundity of why you are there” (Suzuki, 1985, p. 73). This statement intrigued me. His method was not about muscles and physical ability, but one’s centre of gravity; a matter, then, of learning body awareness to adapt to changes through time, teaching me the importance of going within, rather than without the body.

Secondly, I discovered Yoshi Oida (Oida & Marshall, 1997) who had trained in classical Japanese theatre genres, Noh and Kabuki, but had also performed in Western-style theatre. I participated in a number of his workshops, and what I found most inspiring about his method of training actors, was that his definition of acting was not about displaying one’s presence on stage; in fact, quite the opposite.

Acting is about revealing, through acting, something else, something that the audience doesn’t encounter in daily life. The actor doesn’t demonstrate it. It is not physically visible, but through engagement of the onlooker’s imagination, something else appears in his or her mind. For this to happen, the audience must not have the slightest awareness of what the actor is doing. They must be able to forget the actor. The actor must disappear. (Oida et al., 1997, p. xvii)

What amazed me most was how the training involved active awareness of one’s emotions, and of the body’s tiniest detail through imagery, visualization, and keeping the “hara”, or one’s centre of energy, open to keep balance. Every detail of the body, Oida (Oida et al., 1997) argued, corresponded to a different inner reality; for him, good acting was always about learning to keep the balance between the interior movement with the exterior activity. He also emphasized the importance of maintaining an equal and sensitive exchange between actors. Finally, I discovered the work of Sotigui Kouyaté (2000), who also promoted rhythm, movement, and sound exercises to promote concentration, flexibility, relaxation, and awareness.

What piqued my interest in these artists’ work was the wholeness of their approach. Whereas Western theatrical training involved specializing in an area, they saw theatre craft as integrated. Each person’s work affirmed the powerful effect of even small movements on the brain’s emotional impulses. Recognizing the even greater significance of the motor system in influencing cognitive and affective processes gave me new insight into the processes that could
further assist in enhancing the creative process. I would introduce these diverse cultural physical training methods to my students after the program launched in 1999. The results proved beneficial, since students had an increased desire to connect on a deeper level. Perfecting their acting ability, however, would mostly interest Second Wave students.

The Post-Program Group: 2000-2002

Appropriating the Culture of Creative Thinking Attitudes and Aptitudes.

Students first setting foot in the creativity classes had preconceived ideas of what the class would entail. In fact, they expected either a creative writing class, an opportunity to partake in an artistic experience, both as means to explore their personal expression and artistic inclinations. They also, they later told me, anticipated a “bird” course with a light workload, a “feel good” course requiring little brainpower to succeed. It was the first sign that students viewed creativity, and by extension, the creative process, as a mostly inessential skill to anything but personal growth and artistic endeavours. (Students from both the program and other subject areas who “got” it still speak glowingly of the process, and their growth. Students from the program who never “got” it, but just slogged through until the end, still consider the process unwieldy and ineffectual, but it is hard work. It is interesting, however, that some of these students have co-opted some of the process’ elements for more selfish goals.)

I knew I would have to begin by exploring artistic creations as the outcome of creative thinking – familiar ground – before introducing them to either problem solving, or future thinking, as other outcomes of creative thinking. The difference is that artistic creation is a process of discovery of one’s expression by exploring and experimenting with ideas and materials to find meaning, before choosing a specific concept to develop and produce in an artistic form. As such, the structure is more fluid and flexible. Problem solving, on the other hand, begins with a precise idea, a clearly identified dissatisfaction about something that needs to change, and so, one must engage in a structured process of viewing creativity as a cognitive process that can be developed like other thinking processes to solve the problem creatively.
Demystifying Creativity as an Intelligence

When I introduced creativity as a way of thinking, and as a form of intelligence that could be taught and developed, students were unsure what to expect from the class. I reassured them, however, that their assignments would be of an artistic nature. Students later told me the main attraction was the physical work, the “games” with which I would begin each class, making the classes “fun” and certainly unusual at the university level. This corroborated in certain colleagues’ minds that the program’s classes were not rigorous. They preferred to hear the laughter as proof that courses in creativity were lightweight, and never chose to discuss with me the serious research involved. I profess a certain bitterness about their attitude, but was too overwhelmed by all that was involved in running the program after Gravel passed away to involve myself in writing papers, the sure route to collegial respect in a university setting.

My research was in the doing, not in the writing, and for the many years of my involvement with the program, there were so few permanent staff, any time, other than teaching, directing, and fighting for a fair budget, was spent with the artists-in-residence who, though respected in their field, were not pedagogues. Additionally, those hired as permanent staff, who, though maintaining they were on board with the program’s vision, only wanted a job, and either ended up leaving, unable to rise to the challenge, or contributed in severely hampering the program, too enmeshed in their personal agenda to see the forest for the trees.

When I did introduce students to “thinking about thinking”, inciting them to become conscious of their own thought processes, which meant improving their thinking by investigating what was known about the mechanisms of the mind, their interest, or motivation, for the class began to shift. They felt that this objective was the most valuable; it helped them better understand how to maximize their learning outcomes. Realizing that there are different thinking skill sets for diverse tasks reassured them, since they saw how they could transfer the skills to life. Students began to enjoy learning about new ways of thinking, as they explored the biological basis of thinking and learning, which according to de Bono (1999) and Lowery (2001), are patterns. I was beginning to influence and change their thinking habits. However, in spite of this forward progress in viewing creativity as a mode of thinking, two major challenges were in the wings.

Creativity comes from a desire to change something. Awakening one’s motivation to react, however, or feel inspired, or excited about an idea, is necessary. The old-model collective
creation, extolling past struggles, had triggered the Pre-Program Group’s reflective thinking processes, eliciting its embrace of the transformative power of creative thinking. This group, however, had a sense of belonging; students were members of a tightly-woven coterie, facing whatever the world threw at them together. Risk-taking was a given. In contrast, the Post-Program Group cuddled in the opportunity to assemble, which filled their affective need to belong, and to please. Discovering their voice, and instigating change, were not priorities. This would prove difficult in creativity classes.

With little, if any, experience in thinking from different angles or perspectives, a reluctance, albeit understandable, given their affective needs, to be set apart from the group, and an underlying scepticism about the potential of creative thinking, work on developing their mind’s creative habits, or new thought patterns, was a slow process. Furthermore, their ability to make connections with each other’s ideas, or connections between things or concepts with more distant relationships, was challenging. The “bird” course had suddenly taken flight, and the horizon was vast. Many panicked when they could not move an idea beyond the first levels, as they fearfully told their mind was a blank canvas.

They were so entrenched in their safe pattern – their quintessential need to find the right answer, which the ideation process introduced in the creativity classes and La Troupe (the experimental laboratory), floundered in familiarity and stereotype. They did admit risk-taking was problematic, fearing mistakes would lead to failure. All they knew was that attempting to change things, question authority, and not abide by the rules, was punishable non-standard behaviour. They found it difficult, therefore, to give themselves permission to move into what they perceived as forbidden territory; a most difficult affective mindset to overcome.

**Historical Factors Inhibiting Change**

Educational development during the Industrial Age reflected the evolving perspectives and needs of the times. To meet its needs, education of the masses was required. Since a school-based education did not exist in traditional agricultural and feudal societies, education was made available to the general population, instead of the privileged few. The school structure implemented, however, was based on the factory model, a discipline-driven hierarchal organization, which operated from a top-down order and gave power and control to the knowledge providers. Education was strictly viewed as a component for economic survival, and
the model adopted, Odora Hoppers (2000) observed, was based on the human capital theory, named after the World Bank’s proposals relating to building human capital for increasing national productivity, as in production and consumption of economically valued goods and services.

Students were moulded for functional specialization and line responsibilities. They were taught to focus only on their assigned task, and to disregard what happened before, or after their assigned task. Emphasis was on memorization, drills, and mechanical learning, and teaching, Toffler (1990) stated, was seen as a factory activity, young human beings, products to be processed. Schools were driven by what Hartley, McWilliam, Burgess, and Banks (2008) called a provider philosophy, by which the transmission of knowledge offered by professional educators or chosen specialists was to be considered as truth, education being what the inherited disciplinary classifications, methods and bodies of knowledge, professional teachers and command bureaucracies said it was. In the process, students were perceived as empty vessels, waiting to be filled with knowledge and present in the system precisely because they lacked education and needed to be supplied with it, without having much say in what or how they learned. In the process, their expression of demands was controlled or not met, so they engaged in a passive learning process.

Since student’s educational development was programmed with an emphasis on disciplinary thinking, knowledge of a particular facet of reality was more important than understanding the interactions and interdependencies between all aspects of reality. A therefore hierarchal fragmented view of the world prevailed with only, Gee (1999b) stated, the elite (managers and bosses) being able to put the bits and pieces of the work process back together, otherwise their status and power (and claims to higher intelligence) might have been undermined by the perspectives and interests of the front line workers. Schools therefore prioritized the development of, as de Bono (1970) explained, logical and linear/vertical thinking skills to acquire knowledge, these supporting, Land and Jarman (1992) concluded, a thinking style best equipped to solve problems that can be anticipated and solutions preformulated, skills eminently suited for the needs of the industrial age.

The logical and linear/vertical thought process itself simply involves moving from one logical step to the next, always moving towards the correct answer. Ensuring one is right at each step is
crucial, and helps create order, one learning to select a solution by excluding others. Each step, de Bono (1970) wrote, arises from the preceding step to which it is firmly connected, and once a person has reached a conclusion, the soundness of that conclusion is proved by the soundness of the steps by which it has been reached. So, as academic, social, cultural and political practices shaped human beings’ linear thinking process, industry flourished, science and technology proclaiming the use of scientific knowledge was liberating people from bondage. What inevitably followed was an emphasis on technological innovation; machines came to dominate. In summary, if creativity were going to happen, students had to explore, experiment, make mistakes to learn from them and grow, and create change to make things better; the creative processes move exactly in the opposite direction of logical thinking.

Facing the Fear

To comfort students, reduce their anxiety, and preserve their self-esteem, I resorted once again to science, and its ability to explain how our unconscious mind is programmed for our personal, and the species’, survival. I explained that when fear results, it is an indication that there is a possible threat to the survival of the organism, which, in, turn activates the amygdala to protect us by resorting to fight or flight behaviour, which, in many instances, can deny access to the cortex.

Reading Damasio (1994; 2000; 2001; 2003), LeDoux (1996; 2000), and de Bono (1970; 1990; 1992; 1994; 1996; 1999; 2000; 2006; 2008) confirmed that this knowledge was not only beneficial to students, but would enable them to not confuse millennia of the brain’s natural survival programming when faced with new challenges, biologically unable to cope well with change. By developing this awareness, they would be more apt to recognize the brain’s survival mechanism trigger, and manage their responses better. It would also help them understand the different logic state required to access creative thinking. This would hopefully keep their self-esteem intact, but it would be their attitude, desire and effort to learn the mind’s creative processes that would determine the outcomes in the development of their creative potential. The students, however, were still struggling to develop a new mindset. To move the process along, I decided they needed to learn to escape the “error cycle”, which negatively coloured their perception of a mistake, and impacted their progress.
I decided to change the definition of creativity, the whole idea of creating something novel too closely associated with having to produce genius-level ideas, traditional creativity definitions exalting genius. If students were intimidated, thinking their ideas had to fall within the genius level, any progress with their adopting the ideation process was effectively blocked. Too preoccupied with product and marks, nothing else mattered, rising stress levels impeding them from having any ideas.

My definition of creativity, therefore, had to consider creativity in its developmental stage. I began to formulate a developmental theory of creativity to ensure that students would perceive creativity as neither unattainable, nor overwhelming, but as a thinking tool that would open the door to autonomy and action, and lead them to reflect on possibilities, avoiding the pitfalls of manipulation, oppression, and political agendas. They had to first understand that creative thinking did not abide by the same rules as logical thinking. My quest, to capture the very subtle nuances, the mysterious and underlying processes needed to sustain creative thinking and understand creative practice, began. A fresh outlook pervaded my observations. I found that students engaged more in the ideation process when I worked on having the group bond on an emotional level, achieved through physical and imaginative play. My training in mime, movement, and dance had taught me the body’s power to affect emotional and physiological states, power that deeply connected with each other’s energy flow.

I re-read Kang’s (1999) affirmations about the differences between Eastern and Western worldviews. He opined that the Eastern worldview focused more on the process of bonding with nature with, for example, dancers continually searching for deep soul connections rather than on technique, while Western society’s emphasis on technique was more outward, and less instinctive. Theatre, Kang (1999) wrote, “was once a religious experience to reflect our inner depth. Dance comes from eternal depth beings and they release it in the soul of the audience. They release it through image archetypes, the lifeblood of any culture. Dance is archetypical energy, the images transmit it. Images – embodiment of energy” (Kang, 1999, p. 2). If the body, then, made the soul visible, the Western way of thinking was steering us away from the collective urge to connect, certainly an impediment in nurturing a collective creation process. (I would come to further reflect upon this with the Second Wave students.)
Redefining Creativity

The noun, creativity, came into usage in 1875, while the verb, create, dated back to 14th century Middle English, from the “Latin creatus, (...) akin to the Latin crescere, to grow” (Merriam-Webster OnLine, 2010). The latter word’s definition, I thought, corresponded more to an Eastern understanding of the world. This brought me to research the etymology of the word, creativity. According to the Serving History website, “‘creatio’ (...) did not apply to human functions” (Serving History, 2010). It was not until the “18th century and the Age of Enlightenment, [that] the concept of creativity was (...) linked with the concept of imagination” (Serving History, 2010). It was ultimately the creative thinking techniques of brainstorming (Osborn, 1993), TRIZ (Altshuller, 1994), lateral thinking (de Bono, 1974), divergent thinking (Guilford, 1967; 1971), and thinking outside the box (Rushkoff, 1999) that shifted how we now think about the creative process. After much reflection, I opted to present a two-part definition of creativity to students.

In the developmental, or bud, stage, creativity was an individual journey, a growth process, aided by physical and imaginative play. Putting play at the forefront allowed for the creation of the strong empathetic bonds required to foster greater connectedness, which, in turn, opened the door to viewing the gamut of possibilities in change as a period of opportunity, not crisis. In its professional, or accomplished stage, “perspective creativity” enabled seasoned practitioners, or creative geniuses, to improve upon an idea or solve a problem. In summary, the bud stage taught thinking tools, those strategies that fashioned a mindset. The accomplished stage depended on thinking skills, the ability to utilize the aforementioned strategies.

With my newfound perspective, finding common links, or relationships among ideas, would be the first level to finding connectedness among all possibilities. The result would induce new ways of perceiving a situation to assist in problem solving in one’s immediate milieu. Students would learn to navigate between the organizational structures of logical and creative thought (logical thought during times of stability, and creative thought during times of change), each thought process demanding a different organizational culture. With these nuances, and hard work – always the fly in the ointment, achieving the expected goals appeared possible. In time, stress levels would be reduced, and motivation, heightened, The focus would shift from product to process, enticing students to learn to think in perspectives, and create new ideas from these newfound perspectives.
The Evaluation Process

The evaluation process focused more on the ability to see from different angles, than solely on producing original ideas. As such, I was better able to inculcate another mindset, one that would move away from finding one right answer to the excitement of thinking in possibilities. Learning to seek possibilities in change rather than in crises was in the making, and creativity – and the process involved – began to make greater sense to students, as it appeared attainable.

The next step, which I would fully implement with the Second Wave students, would be to teach them to connect different points of view, and morph simple ideas into complex ones by learning to move from obvious to wider connectedness, and a more encompassing mind. Body affect exercises would underpin the process. To better reflect the reinvigorated direction I was taking, I reworked the assessment portion of courses in creativity. Students were assessed on an individual basis at exponential levels of expected learning: Introduction to Lateral Thinking (Level 1 of Play), Introduction to Perceptual Thinking (Level 2), Introduction to Systems Thinking – Pattern Perception (Level 3), and Introduction to Systems Thinking – Pattern Creation (Level 4). Students were then assessed on their collaborative work: Collaborative Thinking – Empathy (Level 5), Collaborative Thinking – Abstract Thought (Level 6), and finally Synthesis (Level 7).

Reflecting the First Wave: A Point of View to Foster the Development of Creativity within an Educational Context

Stein (1974) wrote that “creativity is a process consisting of three overlapping stages: hypothesis formation, hypothesis testing and the communication of results” (Stein, 1974, p. 1), all preceded, he continued, “by a preparatory or educational phase” (Stein, 1974, p. 1) that can be discounted. I argue that a preparatory phase is not only part of the creative process, but also essential to develop, especially for Western thinkers for whom logical thinking is at the forefront of the thinking practices. Without it, the teaching of the creative process is crippled.

What I experienced with the First Wave students convinced me that students could not produce novel and useful ideas, without first being taught the organizational structure of the creative thinking process within safe learning parameters. Ideas – at least, real ideas, those that can germinate to harvest – died in fallow ground, if the brain was not flexible enough. When students managed to demystify lateral thinking, however, expression, and the forms it took, were no
longer compartmentalized. Too often accustomed to logical thinking, it was not easy for students to move from chaos to order, and to understand the mechanisms that allowed them to express what society wanted to suppress. It was imperative to give them the tools, and help them discover those they had in hand, which would allow them to break away from their childhood patterns, and really choose a path.

**Something Other**

Most First Wave students held strong ingrained beliefs: discipline, autonomy and respect for hierarchy. Though admirable qualities, the need to ask permission was strong. There were hints they were moving beyond their parents’ values when the Pre-Program Group faced the university cadres, thinking the program might not be accepted. They were not confrontational; they were prepared. Their parents had fought for their rights; they did the same with the benefit of an education, and dare I say, thinking tools. Some hints also coloured the Post-Program Group. They had chosen to study a non-traditional curriculum, though I do concede that, for some students, it was not so much self-discovery, or a belief that the expressive arts would change them, but it did presage an unconscious need for something other. The Internet was scratching at the door. The latter half of the First Wave had tasted another power, globalization, and I could sense students were transitioning. The Second Wave was upon me.

Nothing is as before, and the future will be unlike the present. The only constant is change. Though clichéd to the extent that all generations have echoed the same sentiment about previous generations, technology has spun a golden, but dangerous, web. We think we are an advanced culture, lolling in our chipset landscape, and we like to think we are in control; we are not, at least not until we have the tools to properly avail ourselves of technology. Previous generations did live through change, but it was earth-based, not cloud computing-based, so rather than whinge about the changes, and teach youth an idealized viewpoint about the arts, a flexible structure for the program, which would respond rapidly to changing client needs to better equip for an unpredictable future, was needed.

The speed of change in our lives, caused by material and technological progress, was depleting both the capacity of our bodies, and our thinking faculties, to adapt. The program had to develop attitudes and behaviours in students to address the gaps; in short, coping mechanisms and a form of thought able to handle the bombardment of images and information exponentially reaching
our brains. Thus, the program chose to walk a conjoined path of creativity and brain function, since it aligned the necessary elements of a preferred model seeking to better equip the future’s artists.

**Technology**

Technology has rendered change a constant in our lives. The world spins faster and faster. There is less and less time to intellectually adjust to change, but more and more time to experience how it disrupts our bearings. Technology is also been shifting individuals’ concept of time, and how reality is understood, creating a psychic disconnect, as the nature and occurrence of the shifts cannot be pinpointed. Consequently, there is not enough time to consider how accelerating trends are creating new expectations, and as society transforms at warp speed, people live in a perpetual state of flux, continuously bombarded by new technological gadgetry claiming to make life easier and more comfortable.

People are not sure, however, how all of these changes will affect them in the long term, let alone where they will lead them. Beck, Swimme, and Senge (Cohen, 2003) addressed the issue by arguing:

> Unpredictable forces of change transform every sector of planetary life and culture—societal, technological, environmental, geopolitical—the terrain of our global village is morphing beneath our feet, bringing with it an increasingly complex, interwoven web of problems requiring our attention, demanding a response. (Cohen, 2003)

More important, however, was the question they (Cohen, 2003) posed, “But what sort of response will truly meet the challenges ahead?” Amid, and some could argue, adrift in this changing world, educators must prepare students for the future. It is ironic then, that no matter the challenges involved in adapting to present-day issues, the expectation is not only define for students the system needed to create a more effective future, but also attend to business as usual. Furthermore, change is devious, wending its way into people’s lives without their being aware. When they eventually do notice, they wonder how it happened, and ask, “Why didn’t we see it coming?” By then, of course, it is too late, and the mind does into a period of crisis.
The familiar thinking patterns, that recognizable mindset which grounds people, are askew. Forced to deal with the turmoil, they invent new mechanisms to adapt. This is not only destabilizing, but also frightening. Habitual points of reference are absent. The floor shifts beneath one’s feet, and one’s balance is awry; it requires great effort to not fall. In the meantime, all one can do is hope time will bring order to the chaos and return the world to sanity. This initial reaction to change, which can be defined as a period of crisis, is filled with feelings of stress, insecurity, anguish, and aggressiveness, since one’s sense of control and comprehension over the given situation is erased, leaving one with nothing but feelings of inadequacy and incompetence. Of course, this reaction to change is natural. Biologically wired to avoid change, it is not that individuals cannot change, but their brain will resist, pattern repetition preferred, patterns allowing the mind to better predict, and obviously, avoid danger. Consequently, they have two choices when faced with danger.

They either paralyze into inaction, feeling incapable of imagining the future. In this state, however, though awake, they are fearful, feeling that their actions lead to nothingness. Therefore, they revert to living in the past, warmly recalling good memories. What is worrisome about living in the past, though, is the loneliness, with less and less to share with those who are moving forward. They may alternatively choose another path, and meet change face-to-face. This reaction is a choice, in that they decide to view change, not as a crisis, but as moments of transitions opening windows of opportunity to the future. They therefore allow themselves to eagerly seek out what new meanings lie ahead that could prove to be beneficial rather than devastating. Choosing to transform the colour of one’s affect when dealing with change does not sound the alarm within the biological self, and this automatically activates the amygdala to engage its defence mechanism of fight or flight. By conditioning one’s mind to manage one’s affect towards calm, one is able to remain proactive, and engage in higher order thinking to take charge of the situation under a new light.

If a teacher decides to adhere to a more positive affect in times of change, the next choice is to step back and contemplate the results of one’s actions in various situations. This means recalling the numerous occasions when faced with new challenges students presented. More important is to recall one’s response. By identifying, accumulating, and weaving together these numerous moments, a much bigger picture will reveal itself, bringing forth new meaning to one’s understanding; a means hopefully to decipher the common links responsible for entertaining and
sustaining the changes. In turn, this reflective practice will engage a teacher to revisit assumptions about how the world works, and reflect on the paradigm changes occurring, enabling her/him to have an open mind to work through these enormous changes.

However, this is no fool’s errand. Learning to think in the big picture, namely system thinking, is only the beginning of the journey with which technology will accelerate the speed of change. Human beings will have to continue dealing with paradigm shifts that occur more often than we think. After all, they are part of a constant evolutionary process, and learning to view change in a different light other than panic is not only necessary but also mandatory.

On a professional level, learning to think through change and with change has been my reality. Some 25 years ago, when my colleague, Hélène Gravel, and I started working together, creativity was at the heart of our common vision. This vision led us to develop a baccalaureate program that welcomed and fostered change. We envisioned a program in which thinking meant thinking in change, toward the future, through chaos, and about the unknown. Change and thinking have been the common buzzwords of my reality. As such, I wish to share my adventure, since to sustain such a vision has meant to continuously foster a pedagogy of change.

**Technology’s Influence: Tripping on the Silicon Chip**

Though I did state the Internet was scratching at the door, it was the program’s door. The First Wave’s First Graduates Group had been nibbling at the possibilities. The Second Wave rushed headlong into the fray. From the development of the first commercially viable steam locomotive in 1829 to the automobile and the airplane, and from the printing press to the telephone, radio, television, and the computer, the world has been awash with groundbreaking innovations.

Kurzweil (2005) had noted that technology was evolving exponentially and that the rate of technical progress was accelerating. He had predicted society could expect to see 20,000 years of progress in the 21st century, about 1,000 times greater than in the 20th century. This accelerated rate of technical progress, Small and Vorgan (2008) wrote, which led to the high-tech revolution attributed to Kilby and Noyce’s discovery of the silicon chip in 1961, forged the emergence of today’s digital system of communication. This chip moved technology beyond the big and bulky vacuum tube, and even beyond the transistor, which required wired circuit boards, to combining
components in an integrated circuit using silicon, a semiconductor material. This single innovation continues to rapidly advance our technology.

As the exponential growth of technology became an accepted norm of performance, the rate of change grew so quickly in the latter part of the 20th century, that instead of achieving, as promised, stability and security, or liberating humanity from bondage, it began disrupting social patterns, producing unmanageable complexity. A large portion of the world’s population still lives in hunger and poverty, terrorism is on the rise, pollution continues to grow, agricultural land and natural resources are being destroyed at an increasing rate, and global inequalities ever grow. Rushkoff (1999) somewhat fatalistically wrote about this being the end with global warming, racial tension, fundamentalist outbursts, nuclear arsenals, bacterial mutation, third world rage, urban decay, moral collapse, religious zealotry, political corruption, drug addiction bureaucratic ineptitude, ecological oversimplification, corporate insensitivity, crashing world markets, paranoid militaria, AIDS, resource depletion, high school shootings and many other societal indicators all suggesting crisis.

Reflecting, therefore, upon how technology has contributed in creating a heightened state of complexity and instability in our society, merits attention. How has technology succeeded in transforming an entire society into this heightened state, without having the means to solve these outcomes? Could it be that the constant growth of knowledge, made possible through the exponential growth of technology, has surpassed our capacity to understand? Are we witnessing the limitations of the mind that gave birth to the complexity we are experiencing? Or, could these technologies be wiring our brain differently, unleashing new intellectual potential we don’t understood how to use?

Rushkoff (1999) argued that it was evident that our ability to see the effect of the cumulative changes in a broader context, to understand its relational and functional qualities, and to grasp the meaning of what is being observed is not within our reach. Whether called ID, MTV, digital cash, or chaos math, he (Rushkoff, 1999) continued, we are bombarded daily with an increasing number of words, devices, ideas, and events we do not understand. On a larger scale, the cultural institutions on which we have grown dependent: organized religion, the medical establishment, corporations, nation states, and even the family itself appear to have crumbled under their weight, all within a few short decades.
Since complexity is a condition that displays nonlinear causality: a way of seeing, understanding, and thinking about the world, it has not been part of our social or educational conditioning. The solution for complex problems, however, lies in quality of thought: the qualities of good insight, understanding, wisdom and good judgment, and essential qualities for the management of complex world systems. We should aim to develop understanding, rather than reach for quantity of information and knowledge (Land & Jarman, 1992). It is then imperative to more closely analyze the impact of new technologies in media like television and computers, off and on the Internet, to see how they have possibly altered how we use our brain. We may gain a better understanding of ourselves during periods of change, and discover what is needed to create schools that are adapted to changing needs.

With mass penetration of the Internet in the mid 1990s, and cheaper machines, students had rapidly adopted its promise to democratize knowledge. According to Internet World Stats (2009), Internet penetration grew from 40.3% in 2000 to 74.9% in 2009, and broadband penetration, according to its April 2007 Review (Internet World Stats, 2009), grew from 12.1% in 2000 to 42.6% in 2004. According to Digital Home (2009), broadband penetration had grown to 69% in 2008, while Statistics Canada (2008) reported that 74.3% of Canadian households indicated they had at least one cell phone.

It was the transition between Web 1.0 to Web 2.0, which made the difference. Web 2.0 was first “coined in 2004 to describe the new way the Internet was moving from read-only pages to more user-interactive, social involvement sites” (Global Telecoms Business, 2009). It was, as Terry Flew wrote, describing the differences between Web 1.0 and Web 2.0, a “move from personal websites to blogs and blog site aggregation, from publishing to participation, from web content as the outcome (...) to an ongoing and interactive process, and from content management systems to links based on tagging” (Global Telecoms Business, 2009).

Futurist John Smart, lead author of the Metaverse Roadmap echoes Sharma’s perspective, defining Web 3.0 as the first-generation Metaverse (convergence of the virtual and physical world), a web development layer that includes TV-quality open video, 3D simulations, augmented reality, human-constructed semantic standards, and pervasive broadband, wireless, and sensors. Web 3.0's early geosocial (Foursquare, etc.) and augmented reality (Layar, etc.) webs are an extension of Web 2.0's participatory
technologies and social networks (Facebook, etc.) into 3D space. Of all its metaverse-like developments, Smart suggests Web 3.0's most defining characteristic will be the mass diffusion of NTSC-or-better quality open video to TVs, laptops, tablets, and mobile devices, a time when "the internet swallows the television." Smart considers Web 4.0 to be the Semantic Web and in particular, the rise of statistical, machine-constructed semantic tags and algorithms, driven by broad collective use of conversational interfaces, perhaps circa 2020.[36] David Siegel's perspective in Pull: The Power of the Semantic Web, 2009, is consonant with this, proposing that the growth of human-constructed semantic standards and data will be a slow, industry-specific incremental process for years to come, perhaps unlikely to tip into broad social utility until after 2020. (Nulli, 2010)

**Appropriating the Culture of Creative Thinking, Attitudes, and Aptitudes: Students’ Mindset and Personal Challenges**

**The Second Wave, 2002-2006**

**First Graduating Class, 2003**

The program celebrated a landmark in 2003 with the first degrees granted. It was a long-awaited moment, some 10 years in the making; the culmination, I would argue, the plays, the graduating students’ practical thesis work, tangible proof of the impact of creative thinking training. The program’s supporters, and I dare say, its naysayers, were justifiably proud.

The experience is etched in my memory. These young artists had risen to the challenge, and produced plays for which they had total control, from initial conceptualization to final product: writing, directing, acting, choreography, lighting, budget, publicity… They had taken risks to give free rein to their imagination and expression, knowing that the program gave them a safety net to engage in research through art. They had broadened their thinking, taking the time to explore their ideas, opinions, and worldview, guided by the program’s tenets to see differently, discern otherness, perceive the invisible, and above all, trust another form of thought: one that has the potential to find solutions to problems where logical thinking fails. They had taken on the responsibility to create, empowered by the energy of the dynamics of the collective creation process. The students’ lived experience involved quality, not ego.
Observations.

First Wave students had written about historical people who had made a difference to provide them with a broader sense of culture, and a sense of belonging to a bigger picture. Their search for their personal voice, however, was evident in their thesis production, once given full rein to express it, but I observed three different approaches.

The first approach was more conventional, students choosing a linear story with progressive action, clearly-defined spaces, psychological character building, successive dialogue, and balance. The second approach was less conventional, students adapting an existing story, but repackaging its visual form. The third approach was more experimental, students choosing to widen textual boundaries, and explore imagery by integrating different artistic media, and film. This last group would inspire future graduates to explore cross-contamination concepts, combining theatre and multimedia, in which words became less important than visual impact. Indeed, visual media and technology became ever important in student work.

Two graduates described their experience to poet, playwright, and journalist, Michel Dallaire (2003).

Student 1.

Axé sur l’ouverture, le programme est en constante évolution. D’une année à l’autre, d’un individu à l’autre, on doit savoir s’adapter, demeurer à l’écoute des préoccupations de chacun. À mon avis, cela crée une belle dynamique qui met l’accent sur le respect et les talents de chaque individu. En plus, cela ouvre la voie à toutes sortes de découvertes dans des domaines connexes. Par exemple, une personne qui, au départ, s’intéresse surtout au mouvement, aura aussi l’occasion d’explorer l’écriture, la voix, la mise en scène... ce qui permet de mieux comprendre l’ensemble du processus de création. Avec le temps, il est clair que les étudiants inscrits au programme feront différents choix de carrière.
Certains deviendront peut-être metteurs en scène, comédiens, écrivains, enseignants, etc. À mon avis, des débouchés existent dans de nombreux domaines. Il suffit de les trouver. Et au fil des années, le programme formera des concepteurs, des gens qui ont une vision d’ensemble de ce que sont l’expression
artistique et la création, des gens qui ne craignent pas le changement, qui savent s’adapter à de nouvelles réalités, qui ont une grande ouverture sur le monde qui les entoure, qui j’en suis convaincu sauront contribuer au monde culturel et social, en Ontario français ou ailleurs. (Dallaire, 2003)

[Focusing on open-mindedness, the program is in constant evolution. From one year to the next, from one individual to another, we must learn to adapt, and remain attentive to everyone’s concerns. In my opinion, this creates a nice dynamic that emphasizes respect and each individual’s talents. In addition, it opens the door to all kinds of discoveries in related fields. For example, a person, who initially focuses on movement, will also have the opportunity to explore writing, voice, staging… thereby better understand the whole process of creation. It is clear that students enrolled in the program will make different career choices. Some may become film directors, actors, writers, teachers, etc. In my opinion, there are opportunities in many areas. One must just find them. Over the years, the program will train conceptors, people who have an overall vision of what are artistic expression and creation, do not fear change, can adapt to new realities, and have a greater openness to the world around them, and who, I am convinced, will contribute to the cultural and social worlds, in French-Ontario or elsewhere.]

**Student 2.**

*La participation des artistes en résidence permet de répondre aux besoins de chaque individu. Chacun peut aller chercher les éléments qui l’intéressent. Dans mon cas ça permis une rencontre avec un dramaturge, une rencontre qui m’a marqué, qui a influencé mon processus de création, qui m’a encouragé à poursuivre. Les artistes en résidence apportent aussi une très grande souplesse au programme puisque d’un projet à l’autre, on peut aller chercher les ressources qui correspondent aux intérêts des étudiants et au projet qu’ils veulent mettre sur pied. En plus, la participation des artistes en résidence permet de démystifier le processus créateur, de comprendre qu’il y a des moments où la solitude et le travail individuel sont importants, et des moments où il faut savoir s’entourer de*
The artists in residence’s participation meet individual needs. One can choose elements, which are of particular interest. In my case, it led to meeting a playwright, an experience that changed me, influenced my creative process, and encouraged me to continue. The artists in residence also provide great flexibility in the program, because one can find the resources that meet students’ interests and the project they want to develop from one project to the next. In addition, the artists in residence’s participation demystifies the creative process, understanding that sometimes, solitude and individual work are important, and that sometimes, we need people who can sustain us, able to support our approach.

A Little More about the Second Wave

Students who enrolled in the program were interested in pursuing the arts as a career. However, the creativity classes were open to students in all subject areas. The more diversified the students, I believed, the more the classes would find new directions. About half of the students’ parents had supported the decision to enrol in the program. These students were as enthusiastic as the First Wave students were. The other half, whose parents disagreed with their choice, was split into those students who displayed a nervous tension for lack of a support system, and those who just did as they pleased. The Second Wave students were mostly from extended families, so traditional family unit ideals and values were confronted by other worldviews and expression, widening the scope of realities. I was witnessing the initial signs that considerable change was on the horizon.

About one quarter of the students had some experience with the collective creation style of work, and about half of the students had experience in a more classical and repertory style of theatre, thereby working from a script, with the director, the central and the dominant figure, making all the choices to achieve her/his vision. The last quarter had little, or no, experience. Interestingly, students with the classical experience aspired to be “Artists”, most of them the “Star” of their drama group, and they fought to establish a similar status within the group.
A period of adjustment was inevitable for them, as collective creation work required a cooperative, not competitive, mindset. For some, this change would be quite upsetting, as battling to make their way to the top of the hierarchy was a game they knew to play very well. Feeling disarmed, as they were no longer the centre of attention, some questioned their love for theatre, or simply contemplated another program with a different philosophy. For others, the change was embraced, as they felt that the stress of watching their back released, enabling them to channel this energy into more constructive developmental work. Overall, however, they were excited. They knew the program was apart from any other, as writing original work and developing their creativity would be at the core of their training.

An Educational Side Note: Student Literacy

As Second Wave students made their way into the program, I noticed that their ability to write was diminishing. Each incoming group was experiencing exponential literacy shortcomings. It was manageable in 2002, but became much less so. The challenges I faced simply mirrored what worried Ontario Ministry of Education administrators, which led to the launch of the Literacy and Numeracy Secretariat in November 2004. I simply faced them later once students graduated from high school.

Interestingly, EQAO provincial testing started in 2002, the direct result of parents, the media, and government officials worried about the state of student literacy. Discussions about literacy were not new, but the return of provincial testing, abolished at the high school level (Grade 13) in 1967, marked a profound disquiet, and an aggressive stance. Students in Grades 3 and 6 would be assessed in reading, writing, and mathematics, and Grade 9 students, in mathematics. Grade 10 students would write the Ontario Secondary School Literacy Test. Ministry officials would ultimately use the data to rewrite curricula, set benchmarks, and retrain teachers.

I neither propose to discuss the pros and cons of EQAO testing, nor the curriculum reforms it engendered. My point is that my future clientele was not achieving as well as expected. Who was to blame for decreased literacy and numeracy? Well-meaning parents who had raised child tyrants into spoiled adolescents? Entitled youth who basked in their power? Well-intentioned curriculum reformers who had waylaid effort for self-esteem? Or, was it perhaps technology exponentially rewiring brains? Whatever the reasons, some students coming into the program
exhibited escalating traits of self-entitlement, selfishness, and dare I say, laziness. They would increasingly not put in the effort required to push themselves beyond the first measure.

A Visual Memory of the Second Wave

The memory is as much auditory as it is visual, and more than one image is needed to capture its essence. It was like watching the Discovery Channel, though nature had little to do with it. This group was progressively more online, delving into the Internet. Students were like children dumping a sewing kit, discovering patterns, thread, needles, bobbins, measuring tapes, and zippers – everything needed to sew a button to fashion an outfit, but their interests were unfocused. They were incapable of choosing a pattern to suit their look.

Some were interested, variously or wholly, in global interactivity, cutting-edge technology, and MMMORPGs (massively multiplayer online role-playing games). Some were reflective about where technology might lead, while others just went with the flow, but interest permutations streamed like technology. The flow of information exhilarated some while it dumfounded others. Two distinct groups formed.

Givers and Takers

The visual that best describes the Givers is butterflies leaving the chrysalis to spread their wings and gently flutter over the terrain of the Internet, alighting here and there, attending to global aches and pains. These students were sensitive, humanistic, and transformative. They wanted to alleviate pain, and brought to the entire group’s attention dire global issues they thought it should tackle.

The Takers were amphibians, neither completely of land, nor of water. Their tadpole fins disappeared before my eyes, metamorphosing into legs firmly planted on the ground, their ground. They became territorial, and claimed it as theirs. It was their virtual world, their playground. They were free from adult supervision, and empowered themselves. They scuttled along the depths of the Internet, searching for and finding underground cultures.

They introduced the group and me to hackers, gamers, nerds and geeks, and flashmobs. They introduced us to Adbusters (2010), which describes itself as a “Journal of the Mental Environment”, which self-proclaims itself as a “global network of culture jammers and creatives
working to change the way information flows, the way corporations wield power, and the way meaning is produced in our society” (Adbusters, 2010). The site’s motto, “Be regular and orderly in your life so that you may be violent and original in your work” (Flaubert, 1821-1880), were their watchwords.

They talked about another website called Disinformation, which, when launched in 1996, was “designed to be the search service of choice for individuals looking for information on current affairs, politics, strange science and “hidden information” that seldom slips through the cracks of corporate-owned media” (Disinformation, 2010). They would attend Disinformation workshops in which people like Howard Bloom talked about his book, *The Global Brain: The Evolution of Mass Mind from the Big Bang to the 21st Century*, and Richard Metzger, a co-founder of Disinformation, talked about the origins of the company. They were particularly enthralled with Russ Kick (2001) who wrote *You are Being Lied to: The Disinformation Guide to Media Distortion*, and Paul Laffoley, an artist and architect, whose “visionary art or outsider art (...) combine[s] words and imagery to depict a spiritual architecture of explanation, tackling concepts like dimensionality, time travel through hacking relativity, connecting conceptual threads shared by philosophers through the millennia, and theories about the cosmic origins of mankind” (Beautiful Decay, 2010). They would also mention Grant Morrison and his highly-acclaimed comic strips like *All Star Superman*, *New X-Men*, and *Fantastic Four*, and Douglas Rushkoff, the famous media theorist.

They dazzled the group with their research, and influenced it to choose some of their ideas. The research was laudable, but their experimentation with disinformation, less so. They wanted to test the university, the community, the group, and me. I was not so naïve as to assume their intent was not self-serving, but I did believe they were searching for real answers to real issues. The future would prove otherwise, but in the meantime, I leapt on board, trusting that the creative thinking process would positively empower this wave of students whose fractured sense of identity left them unresolved and undetermined, but explorative. They were shifting and adapting, even mutating, to the values of their culture.

**Setting the Parameters – The Focus: Finding my Guiding Thread**

In 2003, the Second Wave students broke from tradition, finding no inspiration in previous students’ work in revisiting the past. They wanted to write original work about their concerns.
Remaining faithful to the program’s mandate, the collective creation experience would continue to guide students in finding their voice, but with a new spin, the present and the future. “Great!” I thought, “It’s the moment I’ve been waiting for. They’re starting to pay attention to those everyday moments when they experience unusual intense emotions about issues or events and want to work through those feelings of dissatisfaction.”

It was an awareness that I hoped would broaden their level of consciousness to their environment. It was perhaps a sign that they were awakening their intrinsic motivation, and their desire to define what they were experiencing, making creativity a more meaningful tool in their lives. If they were dissatisfied with present situations, finding the source and changing the situation would require creative thinking skills. As such, I witnessed students getting ready to move into action, and I was more than happy to guide them to ensure that reflective thoughts would follow their actions. I prepared for an exciting journey, since it would be the first time in the program that I would assist students in writing an original script as a means to give them a voice within the technological and global cultures affecting life.

**Stimuli to Activate Intrinsic Motivation**

This wave’s urge to weave the collective creation with a different thread pleased me; a new design was being added to the cultural collective fabric, and I thought students would be passing the shuttle among the group. I eagerly anticipated discovering the world through their eyes. Per usual, I read everything I could about the technological revolution, the world of media, the entertainment industry, and the impact of technology on youth, adults, and society in order to get a broad view of what was ahead. I spent long hours thinking on how to redesign my approach to adopt a trajectory that would help students embrace the present, and engage in future-think to ensure they would take responsibility for the consequences of their actions.

In my research, I came across World Future Society, which offered an annual conference I included in my summer ritual of attending ATHE and CPSI conferences. They were exciting times; I was hearing world-respected researchers from all areas talk about everything that concerned me about students, and the direction a program touting the creative thinking process should take. The World Future Society’s mission was to the point.
The World Future Society is an organization of people dedicated to exploring the future. Since its establishment more than 40 years ago, the Society and THE FUTURIST magazine have endeavored to do one thing and to excel at it and that is to serve as a neutral clearinghouse of ideas on the future. Our mission is to enable thinkers, political personalities, scientists and lay-people to share an informed, serious dialogue on what the future will be like. (World Future Society, 2010)

I learned about trend analysis and long-range forecasting, heard speakers who inspired me to buy their books, and discussed with creators, inventors, futurists, scientists, and artists. I grew exponentially, having the opportunity to engage with people from all occupations, who were thinkers and doers. Without wanting to come across as self-pitying, I needed to exchange with people who were evolving, and demystifying the future. Those many summer conferences proved beneficial to my personal emancipation and my reflective practice towards technology, and a statement by Peter Gabriel (2006) sticks with me. I deeply share his view that “in this digital era, artists should aspire to become experienced designers rather than just a musician, an actor, a director” (Gabriel, 2006). I would return home reenergized, with new tools to assist students in learning how to weave their colours and intricate patterns of thoughts and emotions to find their voice.

Research by students would no longer entail, then, the gathering of detailed information of the past to retell a story from a different perspective. It would instead introduce them to methods of research that entailed understanding how culture and biology had shaped their consciousness, the two factors responsible for our perception of the world. By studying the unconscious development of perceptions, attitudes, assumptions, and habits of perception and reflection inculcated by our culture, they could discover the concepts that managed their actions and perpetuated them. To achieve this end, they would learn to scan the past in a more holistic fashion to discover the agents of change, which, in turn, would help them discover tendencies and patterns, and lead them to create scenarios of possible futures. Developing their ability to see in greater depth, and understanding how our behaviours create our perception of the world, would assist them in learning how to deal with change.
Interestingly, their response to this research style captured their interest for several reasons. Firstly, my encouraging them to dabble in as many domains as possible to make wider connections between perceived patterns and tendencies suited them quite well. To achieve this goal, I encouraged them to surf the Internet, which they loved. “Surfing the Net,” they said, “is much better as you can find information quickly. It is diversified, and visually interesting. You never get bored. Books take way too much time to find information.” (On a side note, most loathed reading: the literacy monster was rearing its ugly head.) Secondly, in my not prescribing a result, they had to find their own way within the parameters of exploration determined by the group. They were happy to choose their areas of interest, which motivated them to venture into meaningful research. Playing the field, so to speak, delighted them, sparking the process of intrinsic motivation; a true collective creation was on its way. Ah, but as Dalberg-Acton (1834-1902) had written, and as I would soon discover, “Power tends to corrupt; absolute power corrupts absolutely.”

Creating the Production

After presenting them the renewed research approach to feed a collective creation, it was business as usual. I started with de rigueur “autobelly” sessions: games and refined physical training, the necessary practices to fine-tune their internal dynamics in preparation for collective collaboration, and foster the attitudes conducive to collective creation, making them more responsive and sensitized to each other’s energy. They would share their research and experiment with physical and verbal improvisation, which led organically to formal rehearsal sessions and a final script.

For the next three years, the story of writing collective creation scripts became sagas, as students explored the ever-mutating world of the Internet. I perceived their preoccupations, worries, and delights through their eyes. They investigated everything: the generational conflict of the adult world’s misunderstanding the virtual world, cryopreservation, nanotechnology, extreme sports, future research centres, hackers, viruses, virtual wars, censorship, Gaia, ecology… In summary, they explored content seeking to find their voice about technology.

Their writing explored word play, and time concepts, and blended different media. There was good work; in fact, their scripts anticipated and touched upon many present issues. They do merit study, but, for the purpose of this paper, I will later highlight areas that illustrate how their work
made me search deeper to develop and access with more facility with creative thinking. Content was not the only element that was changing, so was form.

To varying degrees, they experimented with staging, mixing live feeds, cameras filming actors in other spaces, with what was happening on stage, beginning to think about how collective creations could extend to other cultures, and other milieus. They explored the use of projectors to create images of virtual environments on huge screens, submerging the audience in virtual landscapes. This dynamic use of technology went beyond the notion of collective creation, moving it to collective collaboration, wherein different cultures could meet and create together. They were tentative steps, but transformative, proving geography and time zones were hardly impediments in a global culture. More importantly, their attempts to foster new forms of scenic practices echoed the interactive world the Internet was cultivating. They wanted to find new ways of connecting with the audience, actually quite similar in context with Boal’s (1980) work.

**Reflecting on Students’ Mindsets to Foster Creative Thinking in Laboratory Practice: Givers and Takers**

Parameters established, and the creative process in motion, I paid close attention to student response to my teaching to better recognize the areas that needed more attention, and facilitate the appropriation of creative thinking, attitudes, and skills. How students translated “autobelly” sessions started ringing alarm bells in me; the group dynamic was changing. Two perceptions of the purpose of creativity were taking shape.

The butterfly group had morphed into Givers, and the tadpole group, into Takers. Both perceived creativity as a vehicle to nurture their imagination, and permit access to free expression of their ideas and emotions to explore beyond the logical mindsets, or established patterns, into the realm of other possibilities. The two groups differed, however, in their imaginative projections. The Givers viewed creativity as an important thinking tool, giving rise to novel, aesthetically pleasing, and artistic productions that expressed their collective concerns about their changing world and how the changes were affecting humanity’s well-being. It was also a thinking tool to promote social change, and a means to heighten social consciousness for the good of mankind. As such, creativity had a dual purpose, a means of cultivating group imagination to define group expression about social concerns, as well as improve the aesthetic of art.
The Takers, I would eventually find out, viewed creativity as a means to an end, and in their case, a tool to empower themselves, and feed their ego and pleasure centre. Creative thinking was a newfound power to control, ridicule, shock, or destabilize others. Taking responsibility for the consequences of their actions was not a part of their mindset.

**The Givers: Learning to Cultivate One’s Sensitivity, and be Open and Receptive to Others**

The Givers worked collectively, listened to one another in the give and take of discussions, encouraged and supported one another, and nurtured the positive climate and attitude conducive to fostering creativity. They developed strong positive bonds with each other, respecting each other’s ideas. This group dynamic assisted them in achieving greater depth during the ideation process.

They channelled their energy into the collection creation to raise social awareness, and build a harmonious global community. Their concerns evolved more around collective issues, wanting to address the various effects of technology on humanity. As such, their writing reflected a concern for humanity. Creative thinking was a tool for developing minds that supported democracy, and railed against oppression and domination. A manifesto they included for a production intended to assuage adult fears and mitigate criticism about youth and the Internet.

Nous sommes la Nouvelle Civilisation

Nous sommes ici.

Nous nous éveillons maintenant, hors du passé, pour rêver un plus grand rêve.

Nous sommes amis et égaux, nous sommes divers et uniques, et nous sommes unis pour quelques choses de plus grand que nos différences.

Nous croyons en la liberté et la coopération, l’abondance et l’harmonie.

Nous sommes une culture émergeante, une renaissance de l’essence de l’humanité.

Nous trouvons notre propre chemin, et cependant nous discernons notre propre vérité.

Nous allons dans plusieurs directions, et nous refusons de nous disperser.

Nous avons plusieurs noms et nous parlons de nombreux langues.

Nous sommes local, nous sommes globaux.

Nous sommes dans toutes les régions du monde, nous sommes dans l’air, partout.

Nous sommes l’univers conscient de lui-même nous préoccupant de nous, nous sommes la
vague de l'évolution.
Nous sommes dans le regard des enfants, nous affrontons l'inconnu avec émerveillement et expectative.
Nous sommes messagers du futur, vivant dans le présent.
Nous venons du silence, et nous exprimons de notre vérité.
Nous ne pouvons pas être réduits au silence, parce que notre voix est en chacun de nous.
Nous n'avons pas d'ennemis, nous ne connaissons aucune frontière.
Nous respectons les cycles et expressions de la nature, parce que nous sommes la nature.
Nous ne jouons pas pour gagner, nous jouons pour vivre et apprendre.
Nous agissons par inspiration, amour et intégrité.
Nous explorons, nous découvrons, nous sentons, et nous rions.
Nous bâtissons un monde qui fonctionne pour tout le monde.
Nous essayons de vivre le plein potentiel de nos vies.
Nous sommes indépendants, auto-suffisants et responsables.
Nous nous lions aux autres dans la paix, avec compassion et respect, nous nous unissons en communauté.
Nous célébrons l'ensemble en dedans et autour de nous tous.
Nous dansons au rythme de la création.
Nous tissons les fils d'un temps nouveau.
Nous sommes la nouvelle civilisation. (Funch, 1995)

[We are the New Civilization]

We are here.
We are waking up now, out of the past, to dream a bigger dream.
We are friends and equals, we are diverse and unique, and we're united for something bigger than our differences.
We believe in freedom and cooperation, abundance and harmony.
We are a culture emerging, a renaissance of the essence of humanity.
We find our own guidance, and we discern our own truth.
We go in many directions, and yet we refuse to disperse.
We have many names, we speak many languages.
We are local, we are global.
We are in all regions of the world, we're everywhere in the air.
We are universe being aware of itself, we are the wave of evolution.
We are in every child's eyes, we face the unknown with wonder and excitement.
We are messengers from the future, living in the present.
We come from silence, and we speak our truth.
We cannot be quieted, because our voice is within everyone.
We have no enemies, no boundaries can hold us.
We respect the cycles and expressions of nature, because we are nature.
We don't play to win, we play to live and learn.
We act out of inspiration, love and integrity.
We explore, we discover, we feel, and we laugh.
We are building a world that works for everyone.
We endeavor to live our lives to their fullest potential.
We are independent, self-sufficient and responsible.
We relate to each other in peace, with compassion and respect, we unite in community.
We celebrate the wholeness within and around us all.
We dance to the rhythm of creation.
We weave the threads of the new times.
We are the new civilization.

They also wrote how, in this new world, learning to move with technology was important, as it would open new job opportunities. They opined they were not as lazy as adults thought.

*Mother :* *Pis ton idée de plaisir, c’est de regarder la télé.*

*Son :* *Yeah, Discovery Channel, Mom.*

*Mother :* *Pis ton idée de travailler, c’est d’être assis devant l’ordinateur. À quoi ça sert de jouer des jeux, t’apprendras jamais à vivre! T’as pas de manière! Tu manges mal, tu marches mal, tu t’habilles en guenilles…*

*Son :* *WOAH! WOAH! WHOA! I could be a game programmer, a web designer. There’s my Net Work Manager Executive Processor programs that I created. Styler, Synthesizer,*
Simulator. Bill Gates made more money in a minute than you in your whole life. Oh! there’s a million, oh! OH there’s another Mill…

[Mother: So, your idea of fun is watching TV.
Sons: Yeah, Discovery Channel, Mom.
Mother: So, your idea of work is to sit at the computer. What's the point of playing games, you’ll never learn how to live! You have no manners! You eat poorly, you walk badly, you dress in rags…
Son: WOAH! WOAH! WHOA! I could be a game programmer, a web designer, There's My Net Work Manager Executive Processor programs that I created. Styler, Synthesizer, Simulator. Bill Gates made more money than you in a minute in your whole life! Oh! there's a million, oh! OH there's another Mill…]

In another script, they revealed yet another image of the world they wanted to create.

Character X: Oui, mesdames et messieurs, à bord de ce berceau, nous allons enfanter notre avenir! Nous sommes la genèse de l’humanité. Messieurs, vous êtes Adam et Mesdames, vous êtes Ève. Mais cette fois-ci, nous n’allons pas croquer la pomme!
Chaque livre que tu écris, chaque peinture que tu peins, chaque poème que tu poètes vont être les premiers dans l’histoire… dans notre histoire! Nous allons créer une société à notre image! Pas de guerre sans raison! Pas de kiddy porn! Pas de massacres de jeunes hommes et jeunes femmes innocents! Nous avons avec nous sur cette arche interstellaire nommé DAVInship, les plus grands penseurs scientifiques, technologiques et sociologiques! Ensemble avec nos expertises dans nos domaines respectueux, nous allons créer un nouveau monde. Ensemble nous allons avancer… unis vers l’avenir!!!

[Character X: Yes, ladies and gentlemen, we will bring forth our future on board this cradle! We are the genesis of humanity. Gentlemen, you are Adam, and ladies, are you Eve. But, we won’t bite the apple this time! Every book you write, every painting you paint, each poem you “poet” will be historical firsts… in our history! We will create a society in our image! No more senseless wars! No more kiddy porn! No more massacres of innocent young men and women! With us on this interstellar ark named DAVInship are the greatest thinkers in science, technology and sociology! With our expertise in our
respective fields, we will create a new world together. Together, we will advance… united towards the future!!!]

Another script revealed what they are learning to move forward to achieve their noble ideals.

Shanda : Shit, y’est parti.

Anik : Sans même nous aider?

Tous : Ah non. Qu’est-ce qu’on va faire? On est pas capable de faire ça seuls.

Black Widow : Non, non, il vient de nous aider. On nous a toujours appris à penser qu’il faut chercher la réponse à l’extérieur de nous quand ça va mal. À penser qu’on a pas ce qu’il faut en dedans de nous pour trouver une réponse. Ben, c’est de la marde ça.

Marie-Hélène : Parce que tout ce que ça fait c’est donner le contrôle à une petite élite… leur donner la permission de penser pour nous… de décider ce qu’il y a de mieux pour nous autres. Maudite hiérarchie, elle nous mène par le bout du nez.

[Shanda: Shit, he's gone.
Anik: Without even helping us?
All: Oh no. What will we do? We can’t to do it alone.

Black Widow: No, no, he did help us. We were always taught to find the answer outside of ourselves when things go wrong. To think that we didn’t have what it took on the inside to find answers. Well, that’s shit.

Marie-Hélène: Because all it does is give control to a small elite… give them permission to think for us… decide what is best for us. Damn hierarchy, it’s leading us by the nose.]

The Takers: Learning to Cultivate One’s Sensitivity, and be Open and Receptive to Others

The Takers also supported each other, however, they channelled their collective strength differently. They began to bring counterarguments to anything the Givers said during the ideation process. At first, I thought this was great. There is nothing worse for creativity than being in a group where everyone always agrees. Without provocation to encourage the group to
see and explore other perspectives, the habitual mindset surfaces, and novelty is unattainable. They would provoke, pushing the envelope. They loved to venture into sacred territory, and did not hesitate to touch upon sensitive issues, or beliefs, of different cultural groups. Risk taking, the exhilaration of seeing how far they could go, was tremendously appealing to them.

On the positive side, they instigated many great discussions and reflections about choices, beliefs, and assumptions, as we ventured into the exploratory phase of a production. Again, I thought it healthy. We were, after all, in an appropriate context, research and the exploratory phase intended to develop inquiring minds’ awakening awareness to hidden or silent scenarios that could result in manipulation, domination and oppression of the underprivileged, minorities, the less educated…

To my dismay, since I would come to find out about their activities later on, there was potent negative affirmation in this group. After feeding off the group’s collective thinking process, they would slink away, and produce “happenings”, barging into community activities, disguised in weird clown clothing and wielding play weapons, to stare momentarily at their audience in an aggressive silent manner, before breaking out in gibberish. They would then rapidly exit. They were subverting the creative thinking process for their selfish ends: disruption, shock, fear-based manipulation. They were exploiting a concept of guerrilla theatre to see how far they could go without being caught. They then decided to “manifest” during a public program activity.

Devoted supporters of the program were in the audience the evening the Takers decided to manifest, an evening whose focus was to honour their commitment to a French-language Arts program. Towards the end of the evening, the Takers suddenly crowded the stage, holding the Franco-Ontarian flag, and declaimed that the French language should not to be shoved down their throats, that French and English should be permitted in French-language schools, that censorship in schools should not exist… There I stood, dumfounded behind the podium – and yes, they made sure I was on stage, feeling the audience’s shock. To their eternal credit, the Givers, though also in shock, came on stage, moved in front of them, and apologized to the audience for their rude behaviour, before hustling them offstage.

I could not believe the insensitivity and lack of respect. What they had done was unacceptable, I thought to myself; the context, inappropriate, and the actions, short-sighted. The program had always provided them with an artistic venue to express all issues; but this was a celebratory event
to thank those who had supported the very program that had given them the structure and the tools to find their voice. I looked at the audience; it looked back. Did I speak? That, I do not remember. I do remember the Givers, coming back onstage, to energetically and enthusiastically present the next number, sending me the most incredible warm energy, and engaging me with intense looks that clearly told me that they were not in cahoots with their peers.

At the end of the evening, and I could finally leave the stage, the Givers ran to me, expressing their anger at their peers who had, of course, left the premises. They also revealed the group’s thrill-seeking interventions in the community. I calmed them, and told them we had guests waiting for us. A discussion could wait. “What do we say to our guests?, they asked. “The truth! Your truth! Tell them what’s important to you! The rest belongs to the others.” Inevitably, there was little chitchat at the reception, and the Givers and I were left holding the bag, the Takers having scuttled into the night. The evening’s events spread like wildfire in the francophone community. Ah, the phone calls. All I could say was that I understood the callers’ concerns. I certainly could not promise anything else.

Thinking about the Takers took me full circle. I was deeply hurt, my trust and confidence shaken to the core. At first ashamed that I had no inkling about their activities, I moved onto doubt. Had my work facilitated their underground collective? How had my words been so misconstrued? Why had they felt it necessary to act out in such a threatening way with innocent bystanders? Why had they felt the need to bite the hand that fed them? The signs had been there: their interest in underground, or revolutionary, movements, their passive-aggressive questioning of their peers, their physical awkwardness… It did take a long while before I moved on to anger, or rather, sadness. Were they the next Lost Generation? Were they harbingers of future unrest? If they were so convinced about the truth of their actions, why did they mask their activities, and their faces? Why did they keep running away from possible consequences? If their motives were pure, why did they not perform in context, their audience, whomever they were, in on the point? Why did they not want to engage in discussion? In the end, the damage was done, and would affect the program’s future.

I knew that by developing creative thinking skills, I would be opening the door to autonomy of thought and actions. I knew, and hoped, students would question the status quo, and take action. We had often discussed the importance of utilizing the skill set to create a stronger democracy
for the betterment of humanity. I had certainly never encouraged them to act without reflection, depth, or consideration for others, without taking into account perspectives or consequences to others. Interestingly, the Takers apologized in the year’s final class when I addressed the issue, claiming freedom of speech, and saying they never thought it would be such a big deal. We did engage in discussion, but I never did fully buy the apology, their contriteness too linked to the community’s reaction. I do think that if the community they wanted to shake had applauded their “guts”, an apology would not have been as easily proffered.

The Takers irrevocably changed my perception of youth. I had lost faith, but it did mean I was peering in Alice’s Looking Glass, gazing at a new generation tasting wondrous concoctions, and visiting strange new worlds. They were clothed in techno-fabric, and if I were to re-energize the program’s content, I would have to modify my pedagogical aims once again, and find a critical thinking tool to align their thinking into constructive action.

Peter Senge.

That summer, I read in seemingly unrelated areas to the arts, and searched for conferences that would take me out of my comfort zone. Were others observing drastic changes in youth? Or, had I just experienced an isolated incident? My strong sense of responsibility and commitment to youth was urging me to understand the bigger picture, since incidents are usually indicative of change. Ignoring the issue was not an option. I could not teach with anger seeping through my pores.

I needed to resolve the matter; truly believing the most important value in teaching is truly caring, truly loving youth in one’s care, no matter what they throw at you. My adult self needed to step back and understand their cry, and see farther than what met the eye; we were, after all, responsible for how they were. I have certainly been accused of being a Pollyanna, but my pattern, to believe, and just get on with it, was tightly-woven. It had stood the test of time, and had seen me through stress-filled times, though sometimes, I would just go and have lunch with my parents, my pattern-makers. Their preternatural clear-sightedness was all I needed to help me transform my pain and hurt into understanding what I needed to see through students’ eyes, not my own.
As fate would have it, an email about an International Conference on Thinking: Creating the Future: Paradigms Shifts in all Disciplines (2003) popped into my inbox. “Paradigm Shifts in all Disciplines” spoke to me. I was sure I would find my lead into the Takers’ mindset, and in a workshop geared to business and organization, discovered Peter Senge (1994), who got me thinking differently about how I should be guiding a new digital generation.

Today, “vision” is a familiar concept in corporate leadership. But when you look carefully you find that most “visions” are one person’s (or one group’s) vision imposed on an organization. Such visions, at best, command compliance—not commitment. A shared vision is a vision that many people are truly committed to, because it reflects their own personal vision. (...) A shared vision, especially one that is intrinsic, uplifts people’s aspiration. (Senge, 1994, p. 207)

Furthermore, according to Senge (1994), learning organizations are those where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together. Defining one’s vision, before venturing into a collective vision to eventually learn to see the whole together, seemed so obvious when he stated it. Inspired by Senge (1994), and others I encountered at this conference, I developed a module that would focus on defining a group’s collective and individual vision, before venturing into the research segment of the collective creation per se.

I would find that introducing this new facet to a creative venture forced students to articulate their perception of reality. And so, I began to understand how the internet, mass media, and globalization was altering the very constituencies of their being, which, in turn, gave me insight into my challenge: the underlying growing pain they faced within this new and changing reality. As such, I observed youth’s transition into a new psychic realm.

Since their writing revealed their perception of the world, I began to understand how their concept of space (demographics) was different from mine. I had been brought up to understand (unconsciously) that to make sense of the world, all I needed to know was where I stood in society, which urged people to assume a role in the real world of the job market; a job defined our social identity. Our perception of the world, however, was not as vast as digital youth’s. We could, all being equal, find our role within our community, and give meaning to our lives. We
were happy in our niche; we had a place. With the Internet’s democratizing of information, however, and the overwhelming presence of mass media, this generation’s community was global, not community-based. Youth were witnesses to global issues, had their fingers on the pulse of truly avant-garde work and thinking, and belonged to another community.

In searching what role would define them, their concept of space or territory so vast, they were left feeling overwhelmed, but mostly anonymous. As they would often tell me, “It seems like everything has been done, or has been achieved by others who are already doing it better than we can hope.” As such, the feeling of not knowing how to make a difference, or believing they could make a difference, haunted their spirit. I began to better understand the Takers who had said, “Who cares about anyone, or anything? Why bother? It really doesn’t matter!” I could now comprehend why they resorted to living in the moment, and appeared not to care about tomorrow, or others. It was a defence mechanism to cope with the new reality they faced, a reality whose territory was so vast, their presence was unacknowledged. They were empty vessels, filling the emptiness with whatever made them somebody.

One student wrote, “Notre monde n’est pas tolérant des différences. Il y a toujours une part de solitude à l’intérieur de chacun et ce, peu importe la grandeur de son entourage.” [Our world is not tolerant of differences. There is always an element of loneliness within each of us, regardless of the size of the entourage.] Another wrote, “On ne sait pas vivre quand on est vivant.” [We don’t know how to live when we’re alive.], and another wrote, “On est une société qui prend action mais pas au bon moment. Sommes-nous en contrôle de notre vie?” [We are a company that takes action, but not the right time. Are we in control of our lives?]

Their reaction could be interpreted as a fear response; they were more aware of the global problems their generation would inherit. As one student wrote, “On vit dans un monde où on n’est plus sûr des vérités. On est cruel et entrain de s’auto-détruire.” [We live in a world in which we are unsure of the truth. We’re cruel and in self-destruct mode.] The feeling of anonymity, continuous change, and less stability also affected their behaviour and outlook, as expressed by a student.
Perception de notre société d’aujourd'hui

Quand toutes les ancres de la société lèvent en même temps on peut voir un comportement de saoul chez les gens. Les discours deviennent incohérents, les propos ne sont plus claires, soit un bad trip ou too good to be true. Certains deviennent malades, d’autres deviennent violents et parlent forts pour rien dire. Tout le monde cherche à s’accrocher à quelque chose pour ne pas tomber, mais tout est temporaire car c’est difficile de rester dans une place dans un tel état. Certaines personnes trouve la liberté de faire des choses qu’ils n’auraient jamais eu le courage de faire autrement. Les choses les plus banales nous amusent (reality t.v.). Quand on est saoul, on a donné à un objet le pouvoir de nous contrôler, we relinquished our control to an outside influence. Tout nous influences, on va croire n’importe quoi. Les gens ont relâché le contrôle de leurs vies à des institutions, à de l’argent, aux médias, aux politiciens, le monde spin parce que leur compas intérieur n’est plus en contrôle avec tous ces aimants qui l’entourent. Les jeunes spin moins parce que l’aiguille de leur compas ne cherche pas à se polarisé à une bonne réponse, mais peut flotter plus librement entre tous les points du cercle, donc ils sont moins saouler par toutes les possibilités qui existent, ils peuvent plus aisément faire des choix et s’adapter selon les situations. Quand l’adulte essai d’imposer ses influences, ses vices aux jeunes, eux répondre soit en ignorant l’assaut ou bien ils se gèlent et s’empêche de devenir polarisé et pris dans la course folle d’un compas qui subit trop d’influences, d’un être qui perd contrôle, en se gelant il maintient le contrôle de son être et peut espérer un jour s’en sortir. Il est possible de polariser, d’influencer un compas si la matière qui le compose n’est pas assez forte ou bien si on impose une influence pendant une longue période de temps. Quand ça l’arrive, le compas est détruit, la personne s’autodétruit, annihilation. Elle devient X.”

[Perception of today’s society

When all of society’s anchors are hoisted simultaneously, people exhibit drunken behaviour. Speech becomes incoherent, topics are unclear, or a bad trip, or too good to be true. Some become sick, others become violent and bellow, but say nothing. Everybody wants to cling to something to avoid falling, but everything is temporary, because it's hard to stay in one place in such a state. Some people find the freedom to do things they
never otherwise had the courage to do. The most mundane things amuse us (reality TV). When we’re drunk, we give the bottle power over us, we’ve relinquished our control to an outside influence. Everything influences us, we’ll believe anything. People have relinquished control of their lives to institutions, money, media, politicians. The world spins because our inner compass is out of whack with all those magnets that surround it. Youth spin less because their compass needle doesn’t need to be polarized to find the right answer; it just floats more freely between all points of the circle, so they are less inebriated by all the possibilities, they can more easily make choices and adapt to different situations. When an adult tries to impose his influences, and his vices on youth, they respond by either ignoring the attack, or freeze to avoid being polarized and caught in the mad rush of a compass prone to too many influences, of a being who’s losing control. By freezing, he maintains control of his being and hopes one day to get out. It is possible to polarize, to influence a compass, if what he is made of is not strong enough or suffers an influence for a long period of time. When that happens, the compass is destroyed, the person self-destructs, annihilation. He becomes X.

Other reactions to continuous change also included risky sports like snowboarding, skateboarding, and high-speed games, or extreme sports like water rafting, mountain climbing, and parachuting, just to feel alive, and prove they are able to survive change, predictability, and stability; absolute answers, no longer a viable option. As I focused on youth’s changing perceptions, I was able to move away from feeling hurt by behaviour I qualified as irresponsible, and short-sighted. As such, assisting them in finding a way to make sense of who they were in this vast informational world, made tremendous sense to me, as they could feel empowered until they had a sense of self, worthiness, direction, and connectedness, while viewing the future as hopeful, and full of possibilities.

However, things are never that simple, the changing attitude I observed not only resulted from the changing concept of space brought forth by globalization. The influence of mass media also had a major role in their changing behaviour, consumerism being placed at the centre of their lives which inevitably is a ploy on the government part to define their identity to acquisition of objects rather than people, assuring to contribute to a healthy economy, a phenomenon created by the Baby Boomer generation, which can be commended for having the vitality and willingness to experiment with new ideas, as well as challenge traditional values. Involved in
various human rights movements, they initiated a generation away from an era of obedience and conformity to an era of autonomy as well as “set in motion a process where rights began to dominate responsibilities” (Gidley, 2002). However, a lesser achievement was their display of egocentrism, by which they not only exhibited excessive self-interest, but also undervalued others and their contributions. In fact, the egocentric individualism they initiated still infects everything we do today, and exponentially so.

But increasingly there is an emptiness at the core of this ego-centered desire for autonomy, the cost of which has been a diminished sense of community, a loss of social commitments and a truncated ability to care about others. “Our present idea of freedom”, Wendell Berry writes in the Hidden Wound, “is only the freedom to do as we please: to sell ourselves for a high salary, a home in the suburbs, and idle weekends. But that is a freedom dependent upon affluence, which in truly dependent upon the rapid consumption of exhaustible supplies. (Gublik, 1991, p. 168)

Faced with the influence of consumerism encouraging individualism and selfishness, and youth’s feelings of insignificance in this globalized world, I concluded that I needed to give students the freedom to explore and experiment within clear boundaries to ensure that empathy and respect of other’s perspectives would be part of their mindset with moral ethics, an undisputed practice that needed to be part of their reflective practice. I provided a productive environment, and gave them the leeway to spontaneously react to events, as long as they never violated crucial ground rules and boundaries. I felt the tools I provided would help them learn how to create projects, believe in the potential of contributing to a collective, and come up with new ideas to survive the continuously changing job market, though the tools had more to do with providing them with values in the hope of changing society. And so, my challenges were numerous, but now I saw the depth charge, and hoped to avoid coming into contact with it again. I opened my heart to reflect the positive energy I needed to move me forward and assist them in making sense of their world.

**The Givers: Working on Deeper Connectivity through the Body**

The First Wave had needed to learn how to focus into the self to become available, that is, more open and in tune with their internal channels of energy in order to connect on a deeper level with others to improve their acting skills. I had introduced a new style of exercise styled on an Eastern-influenced approach to the body. The Givers’ response to the exercises was breath-
taking. They embraced the concept, allowing their energy to flow freely, which greatly enhanced the collaborative process, making it possible to achieve deeper connectivity. Their openness enhanced the creative process and their acting abilities, and assisted in creating quality artistic productions. The Givers were highly sensitive and emotionally intense, and had, as Dabrowski and Piechowski (1997) wrote, a heightened capacity for feeling “emotional over excitability” (Dabrowski & Piechowski, 1977, p. 2). They were motivated to free their imagination by working through the body to welcome emotion. Their vitality shone in their joy of reacquainting themselves with their repressed emotions.

The Eastern-influenced exercises, which focused their brain by means of physical engagement, proved to beneficial to the Givers. As they ventured into the ideation process, I observed they would begin with play, eventually quietening down to listen attentively to each other, unconsciously aligning their bodies, ensuring they were directly facing each other to provide undivided attention and energy flow to whomever would speak. It was like watching a choreographed dance; their bodies moving in tune with each other, as though there were a drummer present in the room keeping them in rhythm. They would converse enthusiastically, always in harmony with each other’s movements, creating a group synergy, in which each synchronized to the same wavelength, facilitating a strong bond in the group dynamic. The ideation process flowed, as each added layers to another’s ideas. Sometimes, ideas flowed so swiftly, it seemed one mind was at work.

I also observed that they danced quickly away from stereotypical ideas to more innovative ones. They seemed to be able to tap into each other’s memories, so interconnected, ideas intertwined and spiralled toward new ones. Their individual brains were high-end processors, receiving incoming ideas and connecting them, instantaneously producing new ideations, which were sent out to the group for the cycle to begin again. This degree of commitment and connectedness fascinated me. I knew from my training that heightened connectedness was possible, but its impact on ideas generation was new to me. I decided to investigate scientists’ opinions on the influence of movement on thinking processes. Several researchers’ work spoke to me. As Lakoff and Johnson (1999) wrote,

We are neural beings. Our brains take their input from the rest of our bodies. What our bodies are like and how they function in the world thus structures the very concepts we
can use to think. We cannot think just anything—only what our embodied brains permit. (...) The mind is inherently embodied. (Lakoff & Johnson, 1999, p. 22)

I also read neuroscience studies, which discussed mirror neurons, and how information flows from one brain to the next, an important scientific support of my observations. Gallese, Eagle, and Migone (2007) wrote,

The neural circuits activated in a person carrying out actions, expressing emotions, and experiencing sensations are activated also, automatically via a mirror neuron system, in the observer of those actions, emotions, and sensations. It is proposed also that the shared neural activation pattern and the accompanying embodied simulation constitute a fundamental biological basis for understanding another's mind. (Gallese, Eagle, & Migone, 2007, p. 1)

Recently, Schippers, Roebroeck, Renken, Nanetti, and Keysers (2010) who specifically investigated the resonance property of the putative mirror neuron system (pMNS), and explored whether resonance occurred during a continuous stream of actions, reported that an observer’s brain activity in regions involved in mentalizing and mirroring echoes the temporal structure of an actor’s brain activity. The activity in the pMNS of an observer continuously follows the more subtle changes over time in activity of the pMNS of the actor. This provides evidence for resonance theories and indicates a fine-grained temporal interplay between regions involved in motor planning and regions involved in thinking about the mental states of others. (Schippers, Roebroeck, Renken, Nanetti, & Keysers, 2010, p. 1)

I began to further research the dynamic created among the Givers by reading contemporary philosophers like Burns (2006) who, in discussing his peers, wrote,

most of them have abandoned the Cartesian model of an isolated ethereal mind separated from body and environment, in favour of a physically and socially integrated construct of mind, embodied in the living world. (...) [P]hilosophers such as Martin Heidegger and Maurice Merleau-Ponty have developed a new philosophical basis for the study and
understanding of human behavioural and mental phenomena—"a philosophy that reflects the interpersonal nature of mental life." (Burns, 2006, p. 4)

I pondered about unexplored human potential, a result of society choosing not to tap into the body, or develop affective intellect as much as cognitive intellect. I was once again, up close and personal, with Western society’s fragmented Newtonian worldview, and was dissatisfied. My encouraging students to call upon positive emotions to create a safe, non-threatening environment, my guiding them to keep the body’s energy centre open to each other, trusting they would experience deep and positive connectedness, which effortlessly brought them to mirroring each other, and, of more consequence, improve the ideation process, had nurtured tremendous growth in them. I knew I had to continue exploring this arena, as student creativity was expanding into new dimensions. It was then that I began to trust that creativity was more than an individual process, the by-product of an individual mind.

I gravitated towards researchers like Vygotsky (1966; 1994; 1997; 2004), whose socio-cultural analysis of human thought, which, according to Smolucha (1992), emphasized the social and cultural interactions that underlie human thought and understanding, further underscored that creativity, like other learning, emerged through interactions with other individuals (Smolucha, 1992, p. 54). There were also researchers like Csikszentmihalyi (1990; 1996; 1999), Sternberg & Lubart (1999), Gardner (1983, 1993, 2007), Amabile (1987; 1989; 1996; 2008), and Simonton (2000; 2009), who were referring to creativity as a systems theory, which described creativity as a complex interaction among cognitive processes, personality traits, and interactions with the environment.

Research in cellular biology also drew my attention, with Lipton’s (2001) shedding light on cell control mechanisms to free us from the limitations of genetic determinism.

Rather than behaving as programmed genetic automatons, biological behavior is dynamically linked to the environment (...) [T]he cell membrane is an organic information processor. It senses the environment and converts that awareness into “information” that can influence the activity of protein pathways and control the expression of the genes. As such, the expression of the cell reflects the recognition of all perceived environmental stimuli, both physical and energetic. Consequently, the “Heart
Lipton (2001) was speculating that our thoughts were not within our mind, but resonated within our environment; as such, we would attract the thoughts that resembled ours. We were the product of our environment, and more precisely, the product of our perception of our environment. The Givers, therefore, could reach connectedness, because they created a resonant environment. It was a fragile thread, however. The minute the Takers asked, “Ok, which idea do we choose?”, connectivity vanished. A now-disconnected group waited for a choice. Students then argued bitterly, complaining that their ideas were never chosen, that they always had to compromise, that the process was going nowhere, that something had to give for the production to happen, that they were unhappy... In any event, the Takers competed for their idea to be chosen; the logical outcome to be perceived as important and successful. They were negative and aggressive, using the argumentational style of dealing with conflict, which is at the core of our social organization, and a style that encourages criticism, and judgment. The creative process would inevitably be stifled until the conflict was resolved.

I had not experienced this type of conflict with the First Wave students. They were, of course, still somewhat subservient to authority, and willing – at least, outwardly – to sacrifice the self, their ego, in the group’s best interests. They feared the consequences of not abiding by society’s rules. I do acknowledge that a true creative process less drove productions, since they were still working from published material.

As de Bono (2006) wrote,

> With judgment you come to an idea and then you judge it. You accept the idea or you reject it. For most parts of our life, judgment is essential and extremely useful. The judgment of recognition allows us to make rapid use of past experience and also the experience of others. The judgment of assessment prevents us from making mistakes. Without judgment, it would be difficult to exist. So it is hardly surprising that we have put all the emphasis on truth and judgment.

> Is there anything wrong with this model? No. On the contrary, it is very practical and effective. But it is not enough. Instead of accepting or rejecting an idea, you look at
the idea in order to ‘see where you can move to’. This puts a very different sort of usefulness on ideas. We need much more emphasis on design – for everyone.

Schools are involved with literacy and numeracy. They should also be involved with operacy, which is the skill of operating, or getting things done. In the real world, that is almost as important as literacy and numeracy. (de Bono, 2006)

I thought society would never be able to move creativity forward without finding constructive ways of dealing with conflict. Criticism and judgment always resulted in awakening the students’ fight and flight response, the negativity feeding the survival mode, which led me to another challenge, managing emotions. If a situation’s outcome appears unpredictable, or when we disagree with someone, we react, most usually aggressively. I had to capitalize on new studies about the brain confirming its plasticity to devise tools assisting emotional management to manipulate the limbic system’s functional organization. As Allen (2009) argued,

The evolution of higher cognitive abilities during the course of hominid evolution has been accompanied by functional organizational changes in limbic structures. In fact, we see that several different kinds of reorganizations have taken place: there has been the possible evolution of functional laterality in the hippocampus and amygdala; changes in proportional representation of different nuclei in the amygdale; and the appearance of novel cell types combined with increased volume in humans in the anterior cingulated gyrus. The limbic system may be evolutionarily primitive in some regards, but that does not mean that it has been a static bystander in the dynamic changes the hominid brain has undergone over the past 5 million years. (Allen, 2009, p. 99)

So many layers needed attending before even thinking of witnessing the potential of creative thinking. As Kofman and Senge (2001) wrote, “our very modes of thinking which fostered fragmentation (analytical method to understand problems) reactive and defensive reactions and competitive (where winning is more important than exploring possibilities) are in fact the very obstacles to the process of collective learning as well as inhibitors in the creation of an organizational culture capable of composing with change” (Kofman & Senge, 2001, p. 5). I would certainly have my work cut out for me in better managing emotions and constructively resolving conflict. As such, I knew that new teachings would need to be included in my creativity classes.
**Reflecting the Second Wave**

First Wave students adopted creativity for personal growth, and an artistic experience, rather than as an essential workforce skill. Second Wave students enjoyed the process for the same reasons, but also relished the mere challenge of thinking differently. (This was the generation who loved experimenting with extreme sports, and has been online since they were about 11.) For some, their ease with technology filled their pleasure centre, and they took pleasure in mocking authority figures, or adults, who feared, or were inept with computers. They puffed their chests, feeling important and powerful because they were with the times. To engage them in other than using creativity as a manipulative tool, and since they seemed – the operative word – to easily deal with change, I took the opportunity to develop two types of creative projects.

The first entailed creating an artistic product, while the second entailed proposing an innovative plan of change to a community business of their choice. I had seen them in what they called action, had heard them rattling the bars of their self-imposed cages, and had heard them bemoaning the lack of tangible access to “real” change. Why not awaken them to the wide-ranging possibilities of creative thinking beyond the artistic realm? Why not let them experience local businesses’ enthusiasm – and need – in their ability to think outside the box? Why not get them into the real world? It is where they thought they belonged, anyway. Diverging slightly from the creative process, and introducing creativity, as a form of intelligence, was a bonus for them; they felt they had already been practicing this faculty, technology initiating them into this way of thinking. This wave had no problems giving themselves permission to explore new territory, or view mistakes as a learning process. Their attitude towards authority was changing, however. In fact, two distinct attitudes were surfacing.

The Givers experimented, but remained within acceptable boundaries, considering the impact of their actions upon others. They also respected authority, even though they might not agree its proponents. On the other hand, the Takers questioned, confronted, or defied authority (charmingly feigning subservience and obeisance when it suited their purpose); boundaries and fear-based relationships were not part of their pattern. In fact, many shared the common thread of fending for themselves from a young age, as both parents worked. Others had everything handed to them, so their egos were strong. They wanted what they wanted.
The Givers had more success working in the community. They respected the people with whom they worked. It had nothing to do with being in agreement with them; it had to do with respecting that they were on the line, doing the best they could with what they had. The Givers understood their purpose was to help and guide, not judge and criticize. The Takers had less success. They came in as gladiators, ready to slay the Stupid Beast. They did not listen; they imposed. They did not respect; they flouted their so-called expertise. I had to extinguish some fires, but business people are nothing if not pragmatic. The young people, they graciously offered, had to learn somewhere. It had not been a total wash; the Takers were, after all, concerned with success, and did not totally burn their bridges, but they certainly did deride my methods, and complained about the lack of attention they were getting. From thinking it would be good to get some real-life experience, they had reverted to thumb sucking. In any event, I gradually watered down the real-life projects, until some years into the Third Wave, there was nothing left.

I had hoped that each year’s renewed aims would push the potentiality of group connectedness in the ideation process to new heights. I had hoped to focus on process, and overcome the beginner’s level obstacles and mindsets. I had hoped to move students to the intermediate level, where they would learn to build off each other’s ideas with the sole purpose of not finding the best idea, but the ideas that would connect all ideas together. I had hoped students would move beyond product, the little-c accomplishments, as coined by Csikszentmihalyi (1996). I had hoped the process would be the tool to manage the negative affect of the ego. I had hoped for inclusion, not exclusion. In the end, waving good-bye to the Second Wave students, I allowed myself a moment to loll in the wake of their departure, anticipating the wider connectivity with paradigms, paradox, and opposition I believed the Third Wave would embrace, while in the distance, a tsunami was gathering strength.

The Third Wave: 2007-2009

Background Information

By April 2005, the program had graduated three groups. I was pleased with the progress in the development of teaching strategies regarding creativity. In fact, the students’ work, continuous feedback, and cooperation had contributed immensely in assisting me to expand the body of knowledge on the development of the creative thinking process. My observations on the many
forces transforming society like technology, globalization, politicization and multiculturalism were also informing my need to make creativity increasingly relevant in students’ eyes, my firm belief that a deep understanding of the creative thinking process would help them navigate the challenges of changing times. However, as change became a constant, students’ knowledge intake process and values were also evolving, in ways most unfamiliar to me. As such, I had to learn how to tap into creative thinking more efficiently to assist me in learning how to connect with this wave.

Though I am, as some have intimated, preternaturally fluid, having honed my capacity for flexibility, openness and alertness over the years, this wave kept changing the dance steps. I did trust, though, because of their seeming affinity with global movements, they would have an expanded understanding of human potential. To remain centred, I accepted to move with change and transformation, and developed an even more fluid mindset to synchronize with seemingly future-thinking students. I started by visualizing a positive image of this new venture. I imagined myself participating in the continuous dance of contact improvisation.

Contact improvisations are spontaneous physical dialogues that range from stillness to highly energetic exchanges. Alertness is developed in order to work in an energetic state of physical disorientation, trusting in one’s basic survival instincts. It is a free play with balance, self-correcting the wrong moves and reinforcing the right ones, bringing forth a physical/emotional truth about a shared movement that leaves the participants informed, centered, and enlivened. (ContactImprov.net, 2008)

This image helped me focus on hearing the internal emotional dialogue that propelled students to behave the way they did, and helped me from misinterpreting their external dialogue, though I was often lost in translation, the expression of their disenchantment so powerfully forceful and negative as they attempted to define the world they were experiencing. It also eased my personal tension, since I focused on giving them positive thinking tools to deal with change, but their receptivity was increasingly blocked. My mantra, “Find balance, self-correct the wrong moves and reinforce the right ones.” was sorely tested, but my dance with students could not be static in a perfect state of equilibrium. I resolved to move beyond the balanced pattern the body and mind seek to continuously recalibrate my actions by reaching for both poles in search of a wider understanding of the complex phenomenon I was living.
Youthful behaviour and attitudes have always given adults heartache, but affirming contradictory opinions to anyone in authority is part of becoming a thinking person, so, at the very least, indifferent. I chose to empathize with students, perceiving their opposition to their parents or past generations as a means to express and define their person. To remain positive, I chose to try understanding their dialogue and behaviour by asking myself, “What need does this anger express? What danger is this person experiencing? What is this person asking with this behaviour?” If I could find the answers, and get to the heart of the matter, I believed I would more ably grasp why they were resorting to hurtful actions. As such, I chose to look at my relationship with them from a sociological, rather than a psychological, perspective to distance my affect from them to rationalize their behaviour according to the new social drivers shaping their lives.

Highly sensitive, I wanted to ensure I had a mechanism that would allow me to care about them, no matter the tribulations they caused by lashing out during their transformative period. As a teacher, I had to guide and assist, not command and insist. As a pedagogue, I had to whet my tools to better hone theirs. After all we cannot limit our youth to the learning we have known as all agents of our society are giving a new direction to our future, one that resembles nothing that we have ever lived before.

**The Internet Scene: 2003-2006**

By 2005, the changes I witnessed changes in students’ behaviour and mindset that completely astounded me. I was continuously asking myself what was going on in their heads, and best described this period as the Earthquake Phenomenon. It seemed as though students were caught in an adult versus youth seismic shift, technology punching the generational Richter scale ever upward, continuous tension widening the traditional generation gap fault line that swallowed schools whole, leaving both adults and youth as casualties. In fact, as Cauchy (2005) opined in *Le Devoir*,

*Les ados ont vu le jour en même temps que le cyberespace et ont grandi avec lui. Cette génération est sans contredit la plus branchée: 89 % des 12-17 ans utilisent Internet régulièrement et 99 % y ont recours occasionnellement. (...) L’école est le plus souvent à la remorque de la maison, voire carrément absente du train, en ce qui concerne l'utilisation d'Internet. (...) Au-delà de la quincaillerie, un problème plus fondamental se*
pose: comment demander à des enseignants de développer chez leurs élèves des compétences qu’eux-mêmes ne maîtrisent pas? (Cauchy, 2005)

[Today’s teenagers were born at the time as cyberspace, and have grown up with it. This generation is arguably the most wired: 89% of 12-17 year olds regularly use the Internet, and 99% use it occasionally. (...) Schools are mostly lagging behind home life, even absent altogether, as regards Internet usage. (...) Beyond the hardware, a more fundamental problem arises: how does one ask teachers to develop in their students the skills they themselves do not master.]

In my context, one of the first changes I observed, as this “iGeneration” made its way into the program, was its inability to write, which would greatly affect the process of collective creation. The short Internet IM form had supplanted basic writing skills. Reading books and articles to deepen their understanding was mostly impossible; they could not sustain the level of concentration required to plough through. Their levels of concentration on the Internet, however, could be sustained for hours. My research led me to discover how rapid visual content captured their attention more easily than words on a page. Interestingly, 2005 was also the year YouTube launched.

Only a year later, YouTube was proven the most quickly popularized website in history (...) The popularity of YouTube and similar services, combined with the increasing availability and affordability of high-speed connections has made video content far more common on all kinds of websites. Many video-content hosting and creation sites provide an easy means for their videos to be embedded on third party websites without payment or permission. This combination of more user-created or edited content, and easy means of sharing content, such as via RSS widgets and video embedding, has led to many sites with a typical "Web 2.0" feel. They have articles with embedded video, user-submitted comments below the article, and RSS boxes to the side, listing some of the latest articles from other sites. (Wikipedia, 2010)

As such, society, and especially digital youth, were progressively more enamoured, and consequently influenced, by technology and its offshoots. A visual culture was thereby ostensibly predominant in youth’s way of learning and investigating. I decided to implement a mandatory film course in the program to afford students both the fundamental theories and the
visual language related to film in video, television, and advertising to enable them to deepen their reflection vis-à-vis audio-visual content and develop in them a critical sense, a strong argument and a sharp sensitivity to imagery. In fact, students would eventually be able to earn a certificate in Film Studies after completing subsequent film courses.

Celui qui voit un film avec un œil de connaisseur cesse de l’absorber comme une drogue, il recouvre devant le film sa liberté ; l’éducation cinématographique comporte une formation à la fois visuelle, critique, esthétique. Apprendre à bien voir est aussi nécessaire que d’apprendre à bien lire, à bien parler. Et apprendre à bien voir un film c’est s’initier à un langage complexe pour en saisir les intentions et les symboles. Bien des spectateurs de cinéma absorbent un film tout à fait passivement, ne saisissant que superficiellement ou fort mal l’intention de l’auteur ; ils lisent le cinéma en illettrés. On peut bien donner Faulkner en pâture à un élève mal préparé à le comprendre ; il se rendra compte qu’il ne comprend pas et mettra le livre de côté ; celui qui ne sait pas lire un film difficile peut cependant regarder défiler les images, les acteurs, les lieux et s’en contenter, sans même se rendre compte qu’il n’a rien compris ou qu’il n’a compris qu’à moitié, ne percevant par exemple confusément que le rythme, ou la violence, ou la qualité des éclairages ou l’aspect narratif le plus élémentaire. (Parent, 1964, p. 129)

[One who sees a movie with a connoisseur’s eye stops absorbing it like a drug, and rediscovers his freedom, since film education includes visual, critical, and aesthetic training. Learning to see well is as necessary as learning to read and speak well. And learning to see a movie is to learn a complex language to understand its intentions and symbols. Many viewers absorb a film quite passively, either superficially, or poorly, understanding the author’s message; they are, in fact, film illiterate. We may well leave a student to deal with Faulkner, but if he is poorly prepared to understand him, he will realize he does not understand and will put the book away. A person who is unable to read a difficult film, however, can still watch images, actors, and places stream by, and be content, without even realizing he understood nothing or half-understood, only dimly perceiving its rhythm, violence, quality of lighting, or most basic narrative aspect.]

I thought the introduction of Film Studies would also benefit and serve the program on many levels, the point not to train filmmakers, but youth able to forge links among different fields, and
easily cope with technology permeating all art forms. The courses would help the program keep in touch with technological change by encouraging new types of projects that would pinpoint the intersection where filmmaking, television, multimedia and theatre partners met to develop students’ interdisciplinary skills, and enable them to juggle multiple viewpoints and critically examine phenomena and events. This approach would maximize future theatre conceptors’ professional situations, and better equip them to work in a technological, computerized and digital society.

**Technological Explosion**

As computers gained the ability to handle an explosion of new and more sophisticated data, the introduction of the World Wide Web not only completely opened access to external data sources, but offered users a way to share their work with anyone on a global scale through the use of features like email, YouTube, MySpace, and Facebook, opening their mind to interactivity, connectivity, creativity, and co-creation as new avenues of exploration. Youth morphed from being passive viewers to participatory users with free reign to explore as they wished. They became visually savvy, and as Tapscott (2008) argued, Net Geners were also the new scrutinizers, the ocean of information around them making them more aware that there were few certainties; in effect, leading to not trust everything they saw or heard, so many possibilities surrounding them. Tapscott (2008) went on, writing that youth appeared to have high awareness about the world around them, and wanted to know more about what was happening. They used digital technologies to find out what was really going on. “Trust but verify” was their motto.

Their thinking processes were further altered, as the way to organize information on the Internet changed. New features like hypertext, Google keyword searches, and clicking, cutting and pasting organized the volume of continuously changing information. Young minds were now exposed to the possibility of reading a text, and then deciding to use an embedded link within that text to get to another site to read another text, and so on. This new organizational format introduced more intuitive surfing, allowing users to organize and give meaning to actions, instead of the system providing the direction, or the interpretation of their search. Control was given to users as they decided the order of what they read and when they chose to do so, and as Prensky (2000) noted, children were thinking differently from the adults. They were developing
hypertext minds. They were leaping around, as though their cognitive structures were parallel, not sequential.

From how these new media technologies were stimulating youth’s brains, it was apparent these tools were accessing the brain in a very different manner from that of the paper and textbook generation, which had mainly prioritized the left-hemisphere mode of thinking. After reviewing the outcome of using modern media technology, I concluded youth were developing the right-hemisphere mode of thinking, the processing of visual information with all its features involved in dealing with, as Edwards (1989), and Wonder and Donovan (1995) wrote, nonverbal, synthetic, concrete, analogic, nontemporal, nonrational, spatial, intuitive and holistic ways of thinking.

Left-brain functions were not excluded; it only meant students were peeping into both the physical material and the virtual imaginative worlds with very little adult help or guidance. As a result, youths and adults were drifting farther apart, the adult generation mostly resisting using technology in the same way youth were using it, leading to each generation misunderstanding the other’s illusion of reality. And, as young Digital Natives’ brains were wiring up for rapid-fire cyber searches, the neural circuitry and some parts of the brain that normally adapted to more traditional learning methods were becoming less developed (Small et al., 2008), which, Tapscott (2008) concluded, was leading to problems with face-to-face communication involving emotions. Consequently, youth were experiencing and understanding the world very differently from their parents who had prioritized a more left-hemisphere mode of thinking.

Genes direct the wiring of our brain, Hubel and Wiesel (1979) argued, and sensory experience changes our neuronal networks. Neurological change that is produced by experience is called plasticity, the wiring of the brain plastic in the sense that it can be remodelled, or physically moulded. Exposed to technology for extensive periods, a brain reworks its wiring, its plasticity enabling it to adapt to its environment. Simply put, youth were processing information differently from adults, and since the two modes of thinking are governed by different logics, bringing their own sets of affordances to the making meaning process, youth were increasingly disconnecting from adults and a school system slow to respond to their new learning needs with visual and aural literacies. The escalation of students’ level of disengagement with schools is not malicious; it is the result of how technology had changed the way their brain processes
information. Youth had been using technological devices since early childhood; digital media always surrounding the social and cultural landscapes in which they had grown up.

**An Educational Side Note: Literacy**

Literacy is the hot topic in curriculum development, students’ reading skills from text-based books, and writing skills, steadily diminishing since the advent of digital media and technology. Researchers have been busily rethinking literacy practice to ensure students become more literate in the 21st century, as we face the possibility the Web may become the primary medium for learning in the future. To embrace some important NLS (New Literacy Studies) initiatives, and heighten the reflective process, one must investigate David Booth (2004; 2008), Brian Street (1984; 2003; 2009) and James Gee’s (1999a; 1999b; 2003; 2004; 2007, 2009) particularly relevant research to explore how they are responding to youth’s new learning needs. Traditionally, literacy was defined as the technical skills needed to read and write, and it was presented as a computational objective process. In an effort to modernize schools, the NLS movement modified the definition, introducing the ideology of literacy as a social practice, to the extent that everything persons do in everyday life contributes to their becoming literate individuals. Booth (2004; 2008), and Street (1984; 2003; 2009) and Gee (1999a; 1999b; 2003; 2004; 2007, 2009) made it clear the process of meaning making is much more than the prioritization of structure, as in grammar and spelling.

While Gee (1999) wrote that NLS was one movement among many that took part in a larger social turn away from a focus on individuals and their private minds towards interaction and social practice, Street (2003) proposed it represented a new tradition in considering the nature of literacy, focusing not so much on the acquisition of skills, as in dominant approaches, but rather on what it meant to think of literacy as a social practice, entailing the recognition of multiple literacies, varying according to time and space, but also contested in relations of power. And, according to Booth and Swartz (2004), since literacy was now defined as more than a matter of words on a page, the exploration of media – computers, television, film, magazines, and so on – was seen as an integral part of the learning continuum. Booth (2008) then argued that traditionally, the process of meaning making, or building comprehension, was more than completing comprehension exercises. In seeking to deepen our students’ understanding of the texts they meet, he wrote, everything matters- it’s critical. From these assertions, one could
conclude this new ideological model of literacy embraced the very nature of the right-hemisphere mode of thinking by viewing literacy as a holistic phenomenon or process.

**A Visual Image of the Third Wave: Silent Time Bombs**

Two images came to mind when describing the Third Wave, both revealing to me that something was off kilter as I was bombarded with so many mixed messages that chaos and turmoil, rather than coherence and order, inhabited me. The first image was bumper cars, which seem to move independently, but are hooked together, never moving outside a fixed circular pattern. The only real thrill is crashing into another car. This wave embodied the cars. Never had I encountered a generation so callously focused on crashing into everyone and everything, by continuously displaying behaviours and attitudes of disengagement, disenchantment, and complacency. They were dead weight, steering every which way in their quest to hit something, but mostly, someone. At unexpected moments, however, I perceived sudden awkward attempts to move outside the pattern, but they were unable to see it through, their bumper car bodies having trapped them, and they would soon give up.

The second image was tug-of-war, as I witnessed their abrupt attempts to act, and just as suddenly withdraw. They would, for example, interrupt their own thought process when commenting by saying, “Ah, forget it. It doesn’t matter anyway, or who cares…” I was intrigued. Were they merely unable to decide? Why were they filtering their comments? Were they simply unwilling to assert their truths. I saw them in a field, pulling on a frayed length of rope, the rope’s flag quivering over a puddle of mud, as they engaged in battle. If the point to any game is to win, though, effort must follow. They would hold the rope, but did not strain. They were essentially motionless, waiting – expecting – for the other side to give in, and let them be. They did not, or could not, understand the push and pull of the game, and by extension, relationships, and learning. They simply wanted what they wanted. I feared this lackadaisical attitude masked deep-rooted feelings that would ultimately reach the boiling point. In the process, their creative powers were dissolving. I was watching the evolution of new species that was drastically changing the human spirit. Who, or what, was feeding it? How had youth become so removed? How could I be there for them?

According to Buckingham (2003), “there is now an extraordinary contrast between the high levels of activity that characterize children’s consumer culture and the passivity that increasingly
suffuses their schooling” (Buckingham, 2003, p. 311). This was worrisome. If the feeling of freedom for youth stemmed from being immersed in an online world, replete with endless choices, and their identity was tied to the acquisition of objects and the accumulation of experiences rather than understanding others, they were living an illusion of freedom and agency with consumerism numbing their imagination to the point, as Becker (Cohen-Cruz, 2002) wrote, becoming “oppressed by the effects of the mass media, and held hostage to the prevailing culture” (Cohen-Cruz, 2002, p. 9). How much longer were curriculum leaders going to sit back and resist change, watching youth be stupefied by boredom in the classroom, but fully engaged in the virtual world, revelling in the experience of personal wholeness and connectedness, but unfortunately being duped by consumerism’s meaningless and empty activities?

The educational system needed to acknowledge that the foundation of the Newtonian model taught in schools was obsolete, being overturned by the emergence of a new science, which recognized “that isolated and particular aspects of our world do not lead to the fundamental understanding of nature [since most] of nature operates as interacting and interconnected systems” (Barlow, 1992, p. 32). Barlow (1992) additionally argued that the essence of a system was not so much “in its components but in the linkages and feedback among its units as well as its interaction with other systems [in which the] context is the key” (Barlow, 1992, p. 33). This new science established that not all could be comprehended through analytical thinking and logical thought processes. As scientific understanding of our inner world was increasing, science was admitting a “wider spectrum of reality than quantifiable facts [which included] insights and nonlinear, ways of knowing and melds logic and intuition” (Griffin, 1995, p. 62). It further recognized “that objectivity is a myth, because as the “observer effect” in physics tells us the observer influences what is seen” (Griffin, 1995, p. 63).

Furthermore, the educational system needs to acknowledge that society had lost sight of human aspirations through an overreliance on a consumer economy. It must step up and offer reforms that provide both the vision and tools, which will help youth develop their mind’s potential to better empower them to more effectively engage in the creation of their future. The search for meaning and belonging should not be given over to the latest technological gadget, trend or commercial offering, this giving rise to an unhealthy democracy with meaningful participation denied, and youth’s voice, silenced. The situation needs to be addressed, as youth have been exploring the virtual imaginative world with little help or guidance. Herein lies the problem.
Engaging with technology the way youth have, they have discovered they can live in a continuous pleasure mode with technology continuously stimulating their senses. Their minds freely explore what they desire without constraints. In such a heightened state, mind and body acutely experiencing ‘living’, they conclude that the intense pleasure of being connected with technology doesn’t compare with engaging in face-to-face communication, which is what schools have to offer.

**Setting the Parameters: Finding my Guiding Thread**

I needed to work on meeting two important challenges to move creative thinking to another level in its development. The first was to find better means to assist students in becoming interested in the itinerary, or evolution of an idea, and consequently learn how to foster wider connectivity, instead of being interested in finding one right answer to feed their egos, effectively stifling the creative thinking process. This was not an easy task, the students’ embedded pattern was to receive knowledge, then express it. They had not developed the necessary mindset to make the links with information that let them build new ideas, or co-create knowledge.

A major obstacle that inhibited the development of the ability to enjoy linking ideas was the way we were taught to resolve conflict. An argumentational style was favoured by a consumerist society eager to incite competition, rather than cooperation, to sustain the economy. It was, however, not a method conducive to discovering the power of creative thinking, and its ability to search for wider connectedness. As I had become a devotee of de Bono’s (1970; 1990; 1992; 1994; 1996; 2000; 2006; 2008) platform, I upgraded my knowledge of his theories by participating in numerous training sessions in which I explored methods for dealing with conflict constructively, and actively pursued the best context to prioritize his theories in an academic setting.

The second challenge was more problematic. As a responsible pedagogue, I had to address the Takers’ motivation and intentions in utilizing creative thinking without stifling the process. The Takers, a sub-wave that began with the Second Wave students, enjoyed the power of creative thinking as a means to satisfy their pleasure and uptick their entertainment needs, without, however, much consideration for others and respect for any type of authority. They were not reflecting before doing, choosing a dangerous path to shape their mindset. Opting for empowerment, but taking no responsibility for the consequences of their actions, was
unacceptable, as I firmly believed that the creative process should encompass growth in thinking abilities, and a broadening of one’s values.

I did not think that students becoming autonomous thinkers should be discouraged; in fact, it was my teaching’s most valued precept. I also did not think that blindly obeying authority, or living a fear-based life, were viable options. Secretive, cynical and judgmental students, however, who valued selfish competitiveness, and commanded authority by disrespecting others, were distorting the creative process. I resorted to imposing guidelines and restrictions, a first strategy in counteracting this attitude, but I knew this choice flew in the face of the program’s tenets. I would have to find other solutions. I spent hours the summer of 2006 reflecting on how to shape the necessary elements needed to move students in a direction by which social awareness, empathy and the desire to act in ways to make the world a better place for everyone would make its way into their mindset. Empowering youth to foster the best human development for themselves and others was still a fundamental goal, and a guiding principle at the core of my teaching. Creating the right context was my challenge.

I felt that the right context would be an activity in which students would learn by living the experience, and that it should take place in a real-life context. It had to be a project that fed their desire to take risks; it had to be an adventure. I thought that giving them the reigns to be the authority figures would be beneficial, since that spoke to their mindset, but it also had to be a project that demanded group collaboration to ensure success. They would perhaps, I thought, come to understand both the flush and the burden of authority by living through their choices. Assuming my responsibility in widening their reflective practice, I believed I needed to provide them with a reality check, by placing them in this type of project. Interestingly, de Bono’s (1996) cry for teaching operacy – the skill of operating, or getting things done – within the educational system was more relevant than ever. Previously, only fourth-year students had to specifically apply operacy during their production thesis work. I knew it had become important for all students to exponentially experience operacy.

Since students were using technology and the Internet, I conceptualized a project that would involve using their knowledge to discover new patterns, aesthetics and ways of creating to create a new relationship with an audience, by inviting interactivity or the utilization of a diverse range of media. This project, I enthused, would push their creative thinking to a new level, and
ultimately, give them a sense of responsibility beyond their single self. The project, *Cyber'arts*, would involve all students working together to write a collective creation with virtual partners, using online technology to communicate with them. Physical face-to-face contact would only be an option at the end of the project. It would be a new frontier for creativity, where science, art, and technology would meet at the meeting point of digital technology, art, and education to create a new field of interactive artistic exploration. This new connection, I believed, would open the door to a new context for creativity and exploration of the virtual world with new partners and realities. This fresh approach, combining creativity and its virtual management, would expand students’ notions about the creative process, by using digital technology at all stages, from the outset to broadcast. I hoped the virtual exchange would allow students to better understand the new dynamics of relationships among individuals in cyberspace, and open the doors to a whole new pedagogy, thus confirming the importance of building collaboration in real communities, whether locally or globally, thereby teaching students to be role models in new project management if they wished to integrate into the globalization phenomenon.

**Discovering a Pathfinder**

Wishing to expand the program’s creative scope, while working with students as they ventured into the creative process, I needed to gain further insight into the creative process. Since I believed that only working within the confines of the university did not sufficiently diversify student’s collaborative and collective thinking tools, I sought out a partnership with a forward-thinking school board, which would allow students to explore contact with children, whose innate openness to change and acceptance would, I hoped, increase my students’ viewpoint, hone their collective and collaborative techniques, develop their workshop facilitation abilities, and sharpen their creative process tools.

In 2000, I reconnected with Lise Loiselle, who, at the time, was working in a school board’s special projects division. Loiselle had been a colleague of Gravel’s, and in fact, the three of us had worked on an independent project some years previous, but our careers had taken different paths. As fate would have it, we found each other at a time when we were both searching for a fresh perspective on projects involving children. Our first projects involved workshops for primary- and junior-panel, and eventually intermediate-level, children, which focused on empowerment tools. These workshops fed productions the board commissioned, and which the
program’s students created. The partnership continued at this level for a few years, and resulted in regular discussions about children’s needs, and the urgency we both felt in providing them with life strategies enabling them to be active participants in their future. This, of course, paralleled the urgency I felt in providing my students with the same tools. They had the same needs, and the cause was even more urgent, since they were on the cusp of taking their place in society, and I felt, as I still do, that they were woefully ill-prepared, technology wreaking havoc on their humanity. Agency was the keyword for both groups.

In hindsight, it was a providential reconnection. Without Loiselle’s support, and the board’s collaboration, my ambitious and creative endeavours would not have been realized. I was fortunate a public institution had the vision and the initiative to discern that, as change disrupts, people become disoriented. It is difficult enough to teach children, given the professional responsibilities and multiple roles society has foisted on teachers, but when everything is turned on its head, other tools must come into play. Chaos can destabilize a school board, leaving it to choose between accepting to embrace the future and hiding its head in the sand. In the end, enlightened institutions and individuals venture into new experiences, cognizant of the risks of repeating outmoded patterns. My partner who would go on to be head of special projects, and eventually, director of curriculum services with the board, continued taking risks, believing, as I did, that children merited the energy required to make them citizens, fully aware of their potential and their place in the world. She also believed, as I did, that my students needed the opportunity to widen their scope, ready and willing to be the next leaders.

In time, the partnership’s scope widened to include high school students, and summer day camps for children, and Cyber’arts and Express’arts became part of my programming. Through the partnership’s permutations, change was welcomed, again a risky proposition, in that workshops leading to productions were in the program’s hands. Once she had provided me with an annual overall theme, she let the process flow, trusting in the creative process’ tools to generate an end product, but always tuning it to ensure the projects were running as smoothly as possible. Loiselle trusted in the long-term benefits, understanding that the board’s clientele had to grow from the experiences, and that clear-sightedness, empowerment, and foresight did not spring from unattended soil, and the hit-or-miss nature of traditional audience attendance at a stand-alone show.
Background.

Her commitment to children and my students was immeasurable. She believed that empowering people, and an educational system, was an organic process. She understood new initiatives could upset people, and stressed the importance in moving organically to respect the institution. She adhered to Ontario Ministry of Education and board guidelines, attempted to remove impediments by discussing the projects with her supervisors and school principals, and asked that teachers be present during workshops, hoping they would organically assimilate the process, and entertain utilizing the tools the workshops and work sessions provided.

She had many of Gravel’s qualities. Her love and belief in youth of all ages, and her depth of perception to examine a project’s impetus in an attempt to forestall involved personnel’s anxieties, and attend to unexpected changes the creative process inevitably invites were great qualities. Very few administrators with whom I had worked had revealed being in touch with the creative process, but when complications arose, she attended to the project with even deeper conviction, and we exchanged ideas, and brainstormed to surmount obstacles, viewing our interplay as a means to gain new understanding on how to manage projects, in particular, those involving technology and the virtual world, believing that honing in to a modern student’s world was a hopeful endeavour. Technologically savvy and adept, she believed utilizing technology went far beyond simply using it, and as such, fostered a forward-thinking culture in the classroom. She even took the time to consult with my students, as they asked her sometimes-pointed questions about the purpose of various projects, caught in the end by my student’s distaste in working outside their comfort zone. She was unfailingly polite, probably thinking they were testing her resolve and her vision, and in later years, supported weaker production and writing levels, including some fairly dark material, feeling the themes were part of what the board’s students were also living, and wanting to encourage expression, the true frontier for the growth of critical thinking.

Our work convinced me creative endeavours with multiple partners outside an institution’s walls encouraged people who believed in growth, and valued collective needs, rather than competitiveness and star turns to satisfy ego, to focus on humanitarian growth that protected the essence of creative human spirits. To move creative endeavours, one has to have the ability to easily navigate between affect reaction and logical thinking, in order to differentiate responses,
and act accordingly, learning to keep one’s vulnerability and sensitivity, and remain open and
vibrant to recognize opportunities for the greater good of humanity, yet shielding oneself from
those who fear change. My research partner, as she had become, was, I thought, a model of a
new administrative style, possessing the necessary qualities to manage change and welcome
creative endeavours that ensured growth, rather than stagnation, as the result fearing change. She
wanted students, and teachers, to evolve, and to elevate their consciousness, evidence of a
pathfinder at work. In the end, she entrusted me with an opportunity to truly experiencing the
creative process as an interactive exchange, whose tenets were youth-driven, not ego-driven. Our
projects deeply taught me to never doubt how developing creativity with compassionate
underpinnings was a worthwhile fight, whose process could organically filter into all levels of
the education system, thereby improving it, and all students’ affective and thinking skills.

The Case for High School Students as Collaborative Partners

I decided our virtual partners would be high schools students from 9 different Northern Ontario
schools for two main reasons. Firstly, I considered my students’ fragility – though they would
arguably dispute that comment. They were, however, in training, only just acquiring their chosen
craft’s tools (aptitudes and attitudes). They were also just learning to build their inner strength,
and discover who they truly were. To ensure a positive growth process, and strengthen their core,
always at the heart of my pedagogy, the project had to provide students with a safe platform
upon which they could spread their wings, and explore with a sense of confidence.

While seemingly contradictory, they were still in my care, and this laboratory experiment with a
world outside the university setting could not destroy them. The point was to test their spirit of
inquiry, and strengthen their reflective and emotive skills to give them the tools to deal with the
real world. In my providing them an experimental and reflective space, they could risk with a
safety net, surrounded by seasoned pedagogues and artists to assist them in better understanding
why they did, or did not, meet the challenge. More importantly, they could learn those lessons
enabling them to overcome obstacles, and flow to the next level toward higher understanding.

“When you meet an obstacle along the way”, I would tell them, “and you want to give up, look at
your behavioural patterns, and then remember to revisit the tools the program has provided you.
Open you operacy toolbox, and exchange a tool for one that will allow you to do, or think
differently, to get you over the bump on the road. This is your greatest lesson, as you need to
know what your patterns are when times are hard to change or adjust them to benefit your learning and growth processes, rather than stifle them. You need to know you have the necessary resources within you to do so.” This philosophy, I felt, would ensure they would remain active participants in society, and not wither at the first detour. I also thought students would start the project feeling confident that they had more theatrical knowledge than high school students, and would feel they could better contribute. To have chosen artists-in-residence, or other university theatre students, would have also awakened either competitiveness or a sense of inferiority, which could not be the focus. Building their core was always the essence. Besides, without a solid base in their field, it would be impossible to bring something at the table to create with others and feel they had something relevant to contribute, so I chose partners at the appropriate level to challenge them, yet still once ensure growth.

The challenge I presented my students was an exploration of the theatrical experience in a virtual world, and of how they could become designers without the usual traditional trappings by processing the information that would inevitably come at them from all angles to conceptualize and manage viable solutions and concrete actions with a sense of purpose. This educational activity would enhance, I believed, a true learning opportunity by giving them the chance to critically widen their viewpoint on the technological processes with which they were so enamoured, but whose potential they did not fully realize, and ultimately enable them to maintain their creativity, and perhaps, their humanity, without getting lost in the digital escape.

Secondly, I was acutely aware that my students’ take on collective work was souring, individualism rearing its ego-driven head, and I was concerned a younger generation would be even more preoccupied with self. I thought the project would make them realize how socially inappropriate their own behaviour was by having to deal with similar conduct. They needed to know that it was possible to combine both the individual and the group, and not think they had to choose one over the other. A creative venture of this nature, I was sure, would deepen learning about the different facets involved with creative thinking.

This proactive model still left room for personal autonomy, but more importantly, it would develop in students a sense of personal responsibility in better understanding each other, and the virtual group. Sharing common goals would direct the group’s interaction, hopefully eliminate hierarchical roles, demonstrate that human networking was accessible, and widen expectations
about collaboration, thereby paving the way for future collective, multidisciplinary, and multicultural projects in tune with technology-driven globalization. By learning how to exchange collaboratively, students would learn to manage virtual creative projects, and would be introduced to transformational leadership, a shared management style based on nonconfrontational, cooperative, genuine, and trust-based relationships, rather than on transactional leadership, an aggressive and domineering style based on hierarchical control. Transformational leadership was the most appropriate style for fostering creativity, since it supported collective intelligence, and supported the tools required to manage affect in a virtual project. Furthermore, as a parent and a pedagogue, I strongly felt students needed to experience, which encouraged process, not product.

Creating online, moreover, would assist me in teaching students how to achieve greater connectivity during the ideation process, the context providing all the elements to exercise this new ability. A real life setting would also awaken them to the real world, and responsibility they would have to assume once in the workforce. This project, which included the technology they said they were using, was in harmony, I believed, with the future they expected. I simply had to encourage them see the linkage, reflect on their potential, and invest in the process. I simply hoped to widen their view of the Internet.

Stimuli to Activate Intrinsic Motivation

Students had to first research possible personal and collective directions for the project in keeping with the program’s mandate of guiding students to find their voice. I then introduced a new dimension to their research, Third Wave students preferring to receive information wrapped in the Internet’s dynamic multi-modal format, rich in visual and auditory stimuli. I introduced them to imagery of all sorts, the visual stimuli already their principal means of exploring their imagination to appeal to their senses, rather than their intellect, to fuel the physical and verbal improvisational processes of the explorative segment of the creative process. I chose this path, images possessing the power to unleash emotions and memories, which, in turn, encouraged deeper thinking toward discovering each other’s preoccupations. By exploring the visual world, I aimed to assist them in learning how to decipher the richness and deeper meanings wrapped in the world of imagery. This process could open a new understanding of the “théâtre de l’image”
[theatre of images], as fostered by Robert Lepage (2005) who, like Artaud (1966), sought to elevate visual theatre to the same level as spoken theatre.

The Occident has declared its alliance within the text and finds itself limited by it. (…) This idea of the supremacy of speech in the theater is so deeply rooted in us, and the theater seems to such a degree merely the material reflection of the text, and that everything else (…) [is] quite inferior in comparison with the text. (…) Balinese theater has revealed to us a physical and nonverbal idea of the theater, in which the theater is contained within the limits of everything that can happen on a stage, independently of the written text. (Artaud, 1966, p. 68)

If I were to start the creative process by valuing students’ strength, starting with the images to which they had grown accustomed through their use of technology, they could perhaps learn from Robert Lepage, an internationally renowned artist, acclaimed for his multidisciplinary productions that theatre “ne s’inscrit dans un texte qu’une fois les images établies” [does not register in a text until the imagery is established] (Fouquet, 2005, p. 254). After all, did it really matter what came first, text, images, or physical movement? Was it not more important that all elements be inclusive rather than exclusive, and that each be respected for the individual strength they brought to the ensemble of the theatrical experience, as argued by Hébert and Perelli-Contos (2001)?

Depuis trois décennies, riches en expérimentations diverses, d’importants bouleversements ont marquée la pratique théâtrale au Québec. Touchant autant les contenus que les formes et les procédés de l’écriture dramatique et scénique, ces bouleversements s’inscrivent dans la foule des « révolutions scéniques » qui se sont succédé tout au long du XXe siècle, en Europe en Amérique, et dont la préoccupation commune était de redonner au théâtre ce qui lui était propre : la théâtralité. (…) [E]n explorant, chacun à leur façon, différentes voies de création, ils ont réussi à poser de nouvelles modalités de composition, d’expression et de communication qui ont présidé aux multiples transformations de l’art théâtral. Tributaires de l’avènement du metteur en scène mais aussi de l’apparition des images photographiques et cinématographiques et partageant un langage scénique global, ces transformations ont réussi à ébranler les assises traditionnelles de la représentation, en récusant radicalement le logocentrisme et
Excited to follow their lead into the visual culture, I introduced this new exploratory angle, hoping to ignite their intrinsic motivation and excite them to venture into the creative process, only to receive my first signal that this venture would not be smooth sailing. It took everything to keep going, but I would not – could not – give up, and though I would at times lose my fixed point on the horizon, I trusted I would reach shore. I quickly learned to surf the waves, trusted the wind of good will to guide my board, and let my body go with the flow, focusing on one thing: bringing everyone safely to shore.

**Flattening of the Affect**

Surfing the ‘Net for the Third Wave was old hat; they exhibited none of the Second Wave’s excitement. When I presented the visual stimuli to jumpstart the creative process, they agreed, but less than enthusiastically. My heart dropped. I thought they needed some time to adjust. Surely, the exercises I had planned would get them on board. I was in for a surprise. No matter the shocking or devastating visual stimuli my staff and I threw at them, their verbal responses and physical expressions were flat; they were seemingly emotionless. When asked to find images that had meaning for them, or which stimulated them differently, they always returned to class with a vapid portfolio; nothing seemed to speak to them. It was, in effect, *la loi du moindre effort*, or the line of least resistance. They were not refusing to work, but it was clear they had...
found a way to get around the proposed project by being mediocre, hoping to wear me down, and for the project to disappear.

In retrospect, it was a brilliant tactic. By undermining my trust in their being able to go the distance with the high school students, and by extension, the school board with which I had partnered, they thought they could remain safely ensconced on a stage, which fulfilled their quest for public adulation. At the time, though, I was baffled by their reaction, and struggled to find the stimuli to get them going. I decided to invest some of the program’s budget to rent a cottage to get them out of the school setting, hoping a different milieu would rekindle their excitement to create, to work, to put forth effort. The best-laid plans, they say. They just complained the cottage was not to their liking, and the outing’s outcome was disappointing. What had the potential to dynamize fizzled; I was really taken aback.

Not only did I have to contend with supercilious egos, I also had to carry des lâches: lax, complacent, nonchalant, and cowardly individuals who seemingly wanted to float through life, and evidently, their education. I drilled down into the data I had. Had a daily excessive flow of continuous images and information feeding into their brain dulled their capacity for compassion by numbing their affect to feel anything? Even when I asked them if they were fine or liked what we were doing, they would say yes, but their delivery was flat, and they would shuffle off. Needing to breathe deeply, and step back to look at the big picture to regain my bearings, I reacquainted myself with Edgar Morin (2004), the expert on complexity.

Et pourtant cette planète nous apparaît enveloppée de nuages. Nous souffrons à la fois de sous-information et de sur-information de manques et d’excès. Il est étonnant que l’on puisse déplorer une surabondance d’informations. Et pourtant, l’excès étouffe l’information quand nous sommes soumis au déferlement ininterrompu d’événements sur lesquels on ne peut méditer parce qu’ils sont aussitôt chassés par d’autres événements. Ainsi, au lieu de voir et de percevoir les contours, les crêtes de ce qu’apportent les phénomènes, nous sommes comme aveuglés dans un nuage informationnel. Et si les fortes images de famines, détresses, ruines, désastres, nous reviennent quotidiennement, alors elles se saturent, nous saturent, se banalisent. Alors que l’information apporte forme aux choses, la sur-information nous plonge dans l’informe. Nous subissons la sur-
information; or, celle-ci n’est nullement incompatible avec la sous-information. (...). À la sous-information s’associe l’information-fiction. (Morin, 2004, p. 26)

[And yet the world seems shrouded in clouds. We suffer from both under-information and over-information gaps and excesses. It is amazing that we can complain from too much information. But, excess stifles information when we are subjected to a continuous wave of events about which we cannot think, because they are immediately driven out by other events. So instead of seeing and perceiving contours, the crests associated with phenomena, we are blinded in an informational cloud. And if we see strong images of famine, distress, ruin, and disaster every day, they saturate themselves, and saturate us by becoming commonplace. While information brings form to things, over-information plunges us into the formless. We are subjected to over-information, which is not incompatible with sub-information. (...) Sub-information is associated with information-fiction.]

Morin’s (2004) analysis made me consider that their apparent complacency was perhaps a defence mechanism in view of their inability to perceive that they could realize their dreams or desires; choosing nonchalance was the easiest route. Could it be they had given up? This would definitely temper any possible enthusiasm. However, without ever putting in any effort, how could they ever be happy? I turned to Csikszentmihalyi (1990).

Pleasure is an important component of the quality of life, but by itself it does not bring happiness (...)[and] does not produce psychological growth. A person can feel pleasure without effort, if the appropriate centers in this brain are electrically stimulated. (...) They do not add complexity to the self. Pleasure helps to maintain order, but by itself cannot create new order in consciousness. (...) [E]njoyment happens only as a result of unusual investments of attention (...). It is for that reason that the self does not grow as a consequence of pleasurable experiences. (Csikszentmihalyi, 1990, p. 47)

I was not satisfied, and asked myself hard questions. Why must they be enthusiastic about doing? Was the concept of enthusiasm about learning only a personal assumption? Did they have to show enthusiasm for me to think they were onboard? Did they just not like to show emotion? How could I guide them if they could not, or would not, let me in? My “aha” moment was a wake-up call; this generation did not want to let me in. I had forgotten how the Second Wave
Takers had shrugged authority away with a firmly raised middle finger. Authority figures like parents, teachers, and in reality, anyone not within their tight-knit group, were no longer a source of certainty in this world; thousands of sources engulfed them. The Third Wave could hardly be any different. Any authority was anathema, empowered as they were by the Internet’s democratization of information. They could now call the shots, and find their own answers. Were they searching for intrinsic motivation to guide their actions, rather than accepting traditional academia’s extrinsic motivation theory? Was it the teacher’s task to find the right motivation for students to learn? Were they simply challenging any classroom structure? They did have, after all, multiple sources of comparison.

Natural connection between growth and enjoyment (…) tends to disappear with time. Perhaps because “learning” becomes an external imposition when schooling starts, the excitement of mastering new skills gradually wears out. It becomes all too easy to settle down within the narrow boundaries of the self developed in adolescence. But if one gets to be too complacent, feeling that psychic energy invested in new directions is wasted unless there is a good change of reaping extrinsic rewards for it, one may end up no longer enjoying life, and pleasure becomes the only source of positive experience. (Csikszentmihalyi, 1990, p. 47)

But, having discovered that pleasure and play could be part of learning, students were living a double life, school having emphasized that learning was a ‘serious matter’. On the one hand, they were “schizophrenically liv[ing] out the impossible split” (Jagodzinski, 2007, p. 46), since the discipline of school promised they would find work; on the other, they subscribed to the “freedom” associated with the entertainment industry […] lived out after school or outside the school and on the weekends” (Jagodzinski, 2007, p. 46). In essence, youth were discovering that learning could be a positive experience, the Internet providing them the freedom to make choices in pursuit of their interests, awakening their intrinsic motivation, and making it enjoyable to master new skills, or absorb new knowledge.

In fact, youth were submerging themselves in a world in which they felt they were allowed to experience personal wholeness and agency. Consequently, they perceived the education they were receiving as reinforcing a way of living and viewing the world that constricted their perceptions of what was possible; therefore, dispelling the importance of school in their lives. It was “hardly surprising if children perceive[d] schooling as marginal to their identities and
concerns—or at best as a kind of functional chore” (Buckingham, 2003, p. 311). As such, the virtual project I hoped would have a positive effect and raise their enthusiasm, though conceptualized to move out of the school setting, needed to be managed by them as well. With this in mind, I braced myself for the “autobelly” sessions I hoped would jumpstart their bodies, and have them experience the excitement of deep connectedness, and how it could fuel the ideation process.

**Crash and Burn**

Interestingly, the First Wave let me steer them (authoritarianism), the Second Wave wanted to decide with me (democracy), and the Third Wave wanted to decide without me (anarchy). The First Wave’s productions had centred around their cultural icons, and the Second Wave’s, around their imaginative visions of technology in the future. The Third Wave wrote a new chapter. The first sub-group, the My Way or the Highway students who came into the program in 2005, would started off differently, since I pulled away from mainly focusing on their unique voices by introducing *Cyber’arts*, a project in which they had to consider different generational voices, and which revealed their stand regarding an online creative activity. The second sub-group, which came into the program in 2007, began the Crash and Burn period.

Both groups were similar in that their effort to present palatable productions increasingly waned. Opening the channels to creative thought was damnably difficult, as they could not carry the ideation process into deep connectivity, and imaginative thought. Trying to free their voices was progressively more laborious, and as I discovered in their writing, they were trapped in a daily struggle to find meaning. The “autobelly” sessions, once a safe haven to cultivate sensitivity, openness, and receptivity to others, and to fine-tune their internal dynamics in preparation for collective collaboration and connectivity, were increasingly arduous. They could not access the creative process, and the inertia virus was out of control, infecting all comers.

**Blank Slates**

I had never thought that drama students could be so lethargic with so little energy to spare that games would exhaust them. They could not concentrate, and had no desire to train their body. Some were fit, but for the majority, weight problems, health issues, lack of sleep, or good nutrition were predominant factors influencing their lack of energy, and enthusiasm, and
consequently, interest or motivation for serious physical play. Spending hours in front of a monitor played an obvious role. The consequences of annihilating movement would unfortunately carry through into their creative work. Trying to tune into whatever energy they expressed, I mirrored their posture, and drooped as a sluggish and heavy feeling filled my body. Sitting or standing, they would most often have their arms at their sides, and send out little, if any, energy. In dazed moments, I thought I was looking at corpses.

Baffled, I worked to find new ways to revamp my strategies to get them motivated and more engaged in my classes, but no matter what I suggested, they were limp. They whinged that the warm-up exercises, a usual routine before doing any creative work in the La Troupe class, were difficult and painful. They could not be trusted to complete a warm-up; if I left the room, they stopped. No matter how many times I explained the importance of a well-oiled body to the creative and acting processes, their lack of intensity and commitment to any physical work never changed. I was concerned; the art of acting dependent on an open and articulate body to carry subtext, evince emotional nuance and play with rhythm. According to psychologists Lange and James (1990) who had developed a theory of emotion of special interest to actors, emotion was “our recognition of a bodily condition which is itself a response to some external situation” (Benedetti, 1990, p. 151), the typical fight or flight situation, which allowed an actor to pursue a “character’s action and physical condition with full involvement” (Benedetti, 1990, p. 151), allowing “emotion [to] arise and (…) be communicated to your audience” (Benedetti, 1990, p. 151).

Furthermore, a majority of students began to complain that the dance and mime classes, taught by seasoned professionals, were too physically demanding, and that the instructors did not know what they were doing, and were pushing them beyond their capabilities. (On a side note, the dance instructor was National Ballet-trained, and the internationally renowned mime artists, who had studied with Decroux, and owned a prestigious mime academy in Montréal, had taught mime and movement over 25 years.) Did these professionals ask students to push themselves? Of course. Had they taught in the program before? Yes, and so were acutely aware of their job: to teach nonprofessionals who did not want to become either dancers, or mime artists, but who did need tools to polish their art in a field they had chosen to study. What was the point, I thought, for them wanting to spend four years at the same plateau? In addition, no matter what dynamic interactive activities I attempted in creativity classes, or what energetic presentations I prepared
to entertain them, whether standing on my head, or doing cartwheels around the room, the reaction was always the same. A head nod, sometimes a chuckle, a smile, or laughter, followed by comments indicating they were enjoying themselves, but they did not engage. There were so much dissonance between their nonverbal and verbal expression, I felt their bodies were disconnected from their heads.

Whenever little congruence exists in discourse, there is no trusting relationship. When dissonance exists, we tend to believe what we see more than what we hear, but in this case, what I saw were blank bodies and faces, seemingly compressed into a cement block, and inaccessible. What was happening? Was I witnessing a process in which individuals were not only becoming disconnected from their bodies, but desensitized from their expression of emotion? Was continuous use of the Internet, or other electronic devices, which demanded one remain seated for long periods of time, and provided fast pacing and continuous flow of visual actions, morphing into the automaton drills to which soldiers were subjected during combat training? There was a point to these drills, though. Soldiers needed to be emotionally desensitized to counteract the natural human flight reaction from threat. Were the Internet, and its associated technology and games, similarly affecting students’ brains? Were they flattening their affect? The similarities were eerie.

I recalled observing my son and his friends play video games, and thought about myself when I took the plunge to discover what their attraction was. I had discovered I had to push down, or repress my emotions, to not react to a game’s rapid pace, or I would always be screaming, continuous change constantly introduced at unexpected moments. If one allowed one’s emotions to be involved, it was impossible to react to the stimuli to win a level, much less the entire game. It took a long time for me to level up, until I began to understand I could not feel. I just had to watch and react. I had to learn to relax, and tamp down my emotion; in essence, train my amygdala.

I remembered a particular discussion about the effects of games with my son, who stated that once a player managed to “get good”, and had played a while with his partners, he knew what strategies to use without even talking with them. It was that connection with his partners, and the thrill of meeting a challenge together to become the best to gain other players’ respect, he most enjoyed. Discovering that connection, no matter its envelope, was still important comforts me.
Perhaps gaming was not an emotional wasteland, after all, and cyberspace was just a different playground to make friends. They did not physically wrestle, but their minds certainly did. And so, I pondered about the new connective medium that was obviating the body.

Secondly, with students’ most common posture the zombie-like slouch, a position firing the brain to assume relaxation or rest, the body was passive, apathetic, and disconnected from its core at the navel level (as movement specialists call it), the area where energy reserves lie in wait for a call to action. The body weakened, feeding little else than dull voices and lifeless eyes. This made me shiver. It seemed an overuse of technology was teaching students to disconnect from their bodies and their emotions by flattening their affect, thereby pruning the depth necessary to nuance thinking, affect required for effective rational thought processes.

I knew both neuroscience and cognitive neuroscience research endorsed emotions. As Damasio (1994) had pointed out, emotion was integral to the processes of reasoning and decision-making. He called attention to patients with brain damage in the areas of the brain that integrate the emotional and cognitive systems who could no longer effectively function in the day-to-day world, even though their mental abilities were perfectly normal. He argued that emotion could no longer be pushed aside without interfering with nature’s intention, attainment of an individual’s greater potential in which “emotion assists reasoning when it comes to personal and social matters involving risk and conflict” (Damasio, 1994, p. 42). He concluded that selective absence of emotion was problematic, well-targeted and well-deployed emotion the bulwark, which supports proper reasoning. To dismiss emotion, he said, and to treat it as an unnecessary evolutionary appendage was questionable, emotions being the embodiment of the logic of survival. For LeDoux (1996), interest in emotion was renewed when cognitive scientists discovered how to “study mental processes without having to solve the mind-body problem by studying how the brain processes external stimuli.” (LeDoux, 1996, p. 156) Certainly, the coming-of-age of non-invasive technology like fMRI, which can trace brain activity and enable researchers to find the origin of emotion in the function and structure of the human nervous system, helped encourage the study of emotion.

To add fuel to the fire, students’ levels of concentration was so diminished, I could not switch activities quickly enough before their eyes glazed over, and I knew that I had lost them somewhere in the ether. They often reminded me of Star Trek characters on a transporter pad,
waiting perfectly still for their particles to be beamed onto another planet. Unfortunately, the buffers – my cartwheels notwithstanding – could not rematerialize them. Nothing worked. They were still good people, but were so disaffected from process, they could not sustain the concentration required for detailed work, could not elevate their acting skills, or go beyond fairly elementary creative thinking. Production values suffered, though that was just the tip of the iceberg.

The influx of competing messages that we receive whenever we go online not only overloads our working memory; it makes it much harder for our frontal lobes to concentrate our attention on any one thing. The process of memory consolidation can’t even get started. And, thanks once again to the plasticity of our neuronal pathways, the more we use the Web, the more we train our brain to be distracted to process information very quickly and very efficiently but without sustained attention. That helps explain why many of us find it hard to concentrate even when we’re away from our computers. Our brains adept at forgetting, inept at remembering. (Carr, 2010, p. 194)

Startled by these thoughts and observations, I determined to discover if similar behaviour was making its way into students’ work in other ways, because, if so, students were not simply in a transitional phase’s throes, but were by their inaction telling the educational system that it desperately needed to change if they ever were to be reached again. I certainly could proffer proof that students were rarely in a classroom with other than a physical presence. They no longer, and in fact, had not for a good period of time, paid attention to a same vocal signature emanating from a same individual who tended to stand in a more or less fixed area in front of the class. (Of course, they were not paying much attention to anything in the classroom, no matter how dynamic it was.) Their minds drifted, as their brains, bored with the lack of pace, wandered. More importantly, students had a point of comparison, and knew that a learning situation could feel quite different and be much more stimulating, so they lost focus very quickly and disengaged from learning. In fact, studies by researchers like Sperry (Finger, 2005), Buzan and Buzan (2003), and Ornstein (1997) had shown that our brain is comprised of many corticals, shared by our right- and left-brain hemispheres, that include words, images, numbers, logic, rhythm, colour and spatial awareness (Buzan et al., 2003).
These studies demonstrated that the more corticals were activated at a given time, the more the brain was stimulated, and consequently, the more memory and the learning process were enhanced, increasing our attention span. Since attending a lecture involved using much fewer corticals than learning through digital media, students were finding it progressively harder to ignore the disparity between the two learning styles. So why did Net Geners seem to have, as Tapscott (2008) questioned, attention deficit disorder in class? He posited they were bored with both with the slow pace and the content of the lecture. He noted that Prensky (2000) had argued their attention spans were not short for games, music, rollerblading, spending time on the Internet, or for anything else that actually interested them. It was clear the Third Wave was suffering the long term physical, mental, and affective impact of spending many hours sitting in front of a computer surfing, scanning, playing games, watching movies, and listening to music – mostly at the same time. Research showed that digital visual media had not only heightened their sensory input, but also made them crave more stimulation, more information, more impressions, more complexity. Klingberg (2009) wrote that there was clearly something inherently attractive to us to push our own boundaries, as we love stimulation. In fact, he noted Steven Johnson’s explanation that the more complicated a situation, the more it fulfilled a need within us to probe and seek stimulation.

Stimulation had permeated students’ lives in their desire to multi-task; youth often studied while texting, talking on their cell phone, listening to music, and reading e-mails. Such behaviour was a voluntary action, not something that simply made them victims of ruthless technological progress. Certainly, Small and Vorgan (2008) found, the high-tech revolution had accelerated our compulsion to pursue what was new and better to the point where much of our youth-oriented culture obsessively avoided technology obsolescence. Our environment’s incessant digital bombardment has caused young brains to evolve in such a way that each technological invention had an almost irresistible draw, and if the transmission of knowledge by means of a lecture had become less effective in learning, various digital technologies and media had expanded students’ sense of the world, enabling them to directly experience events from around the world, an arguably more engaging holistic learning experience than listening to one voice. (Small et al., p. 20)
At this point, I was counting on the virtual project to energize my students; after all, they would be able to do what they did best: work with computers while remaining seated, at least for the duration of the conceptualization of the show with our virtual partners. The group’s reaction to the project was initially favourable, as they anticipated being given the opportunity to play with their preferred exploration tools, yet were mostly oblivious to what was involved in managing and participating in the co-creation of a theatrical script with our online partners, students from nine different high schools.

As much as the group enjoyed being online, however, the reality of venturing online to co-create with multiple partners from varied geographic areas, soon hit them. They would become acutely aware, as would I, of the difference between being technologically savvy and technologically adept, a fact that surprised them, and me. I had believed their chatter, and truly, had no reason to not believe, that they were power users. Most students were simple users, but unaware of their lack of true skills, their inflated self-assessment of their competence was certainly highlighted by this project. Avid users of technology for mostly entertainment, communication or surfing, they had felt superior to adults.

When they had to work with technology as a tool to create and co-create, however, they began to understand that managing a virtual project required they invest a great deal of time and motivation, as each participant’s level of engagement in the virtual project needed to be sustained for the project to be successful. Before venturing into the creative portion of an online collective script, for example, they discovered that organizing a virtual session meant finding different ways of creating an environment conducive to supporting and developing relationships among participants. The exchanges, therefore, were not just about exchanging information; otherwise, participants soon lost interest. This was only the beginning, as they had to determine each person’s role, understand what activities would foster conversation among individuals to keep everyone interested, send e-mails to keep a rhythm to the project, decide upon what tools and when to use them to communicate (web conferences, text messaging, forums…), keep everyone well-informed, remember that nonverbal language was not an option to find out how the project was moving, underscore each person’s contribution encourage, and finally, tackle the creative portion. They learned that quality creative work required more than good surfing.
abilities and good physical reflexes. In the end, that may have been the fly in the ointment. Though my intention had been to highlight their abilities, it seemed the project was doing the opposite, and took up a lot more time than I had imagined, which ran counter to how they wanted life to be.

**An Audience Perspective**

The project’s outcome was quite amazing. In summary, the high school students acted their scenes, which were streamed live onto three huge screens set up in the university’s auditorium. My students interacted with the high school students from the auditorium’s stage, and these scenes were streamed live to the high schools. Both groups had to watch the screens, patiently waiting their turn to perform. The audience was dazzled by all the visual activity and interactivity.

It was odd at first, as the high school students could not gauge the audience’s reaction, but everything came together for them after they travelled to the university to experience the show in situ, and became the audience for other high school students streaming their scenes. Once they understood the big picture, they lit up. The uncertainty disappeared, and another level of enthusiasm in the project took its place, because upon seeing other high school students on screen excited them. They “got” how streaming opened up new interaction possibilities with each other and the audience. When it was their turn to perform, they had already come up with new ideas to make their scene more interesting, innovative, and for the most part, funny, as they experimented with various camera angles.

Even my students discovered increasing possibilities as the project evolved, the secrets of the virtual world slowly revealing itself to their imagination; they basked in the praise they received for putting it together. And so, the project was viewed as a great success, and as a high school teacher remarked, totally flabbergasted by the experience, “When the students finally met face to face, they interacted immediately, as if they had known each other for a long time.” The online interactivity had eliminated the usual discomfort in finally meeting face to face; connections were almost instantaneous.
An Inside View of the Process and Outcome of the Virtual Project

In spite of a relatively successful first virtual creative production, the behind the scenes process was not easy, and many obstacles had to be overcome. I had not anticipated some overwhelming technological problems. Firstly, though both institutions, the university and the school board, purported to be ready to take on the challenge, and to their credit, both tech services did everything in their power to smooth the rough edges, the technology to afford smooth online communication was not quite ready, causing many logistical problems. Feeds would time out, equipment would crash, and software would freeze. And there certainly was no money to calibrate all participants’ technology. Secondly, many high school students had limited access to advanced instructional technologies, or did not know how to operate them very well, though this was not particularly different from my students’ capabilities. Thirdly, although technology enabling interactive instruction may be highly engaging, many teachers had no experience with it, and there was some resistance. Principals had come onboard, and had assigned the teachers they thought best fit the project. Though I had requested participants have some technological know-how, this was not always feasible. And again, technologically savvy is not necessarily technologically adept.

The human challenge belonged to my students who were the ones who had to create the various contexts to stimulate the participants, as well as find all the necessary connections between the parts to create an ensemble. At first, it took a while for the high school students to get on board with the project, as they did not know what to expect from this exchange, all usual communication points of reference during a group project non-existent. They hung on, though, troopers to the end, as the Givers persisted in investing a tremendous amount of time in keeping in close contact with them. In fact, they even assisted the Takers in sustaining the high school students’ interest in the project, ensuring it would be a success, and learning what was involved in managing a creative virtual project, which necessitated well-thought interactive strategies. In the meantime, I noticed differences between the Givers and the Takers.

Meeting the Objectives

I still needed to work on meeting two important challenges to move creative thinking to another level in its development. I firstly had to find better means to assist students in becoming interested in the itinerary or evolution of an idea, and as such, learn how to foster wider
connectivity, rather than be only interested in finding one right answer to feed their egos, stifling creative thinking. I then secondly had to address the Takers’ motivation and intentions for utilizing creative thinking. The Takers enjoyed the power of creative thinking, as a means to satisfy their pleasure and entertainment, without much consideration for others, or respect for any type of authority. Empowerment without taking responsibility for the consequences of an action was unacceptable, as I firmly believed that creativity should encompass growth in the ability to think, and a deepening and broadening of one’s values.

Students certainly had their work cut out for them in managing an outside group. They had many precise guidelines to incorporate in the show. My students had to ensure each school group wrote some aspect of the script within a month (6 virtual sessions + many hours of e-mail contact), and rehearse their part on the virtual screen, without much rehearsal time. They were also the live show’s main actors, joining the high school students projected on screen. However, they held the creation’s reins to steer the ship. They brainstormed ideas to find a framework within which to create the show with the students. They had to come up with different activities or scenarios to provide the high school students with writing material, and chose their parts.

The Givers were always prepared, ready to share multiple ideas, while the Takers put little thought into the work, essentially latching or mooching onto others’ ideas. I heard the Givers complain about the Takers’ carelessness, but the playing field levelled a bit when each student had to assume a leadership role during the virtual sessions. The Takers then had no choice, but to work hard, as their reputation was on the line, but in the end, they all complained about something. Of itself, this was no different that what I heard most days, but somehow I thought this project would move the Takers toward generosity of spirit.

The Outcome

The Givers were interested in pushing their ideas farther, so the high school groups would stay interested, but when I suggested they work together to push their ideas even farther, they were not interested; they did not want to find more time to regroup. I was witnessing the fact that group gatherings, and connecting face to face was less and less appealing. Their ideas were good, but none reached the Second Wave’s innovation, but when they combined their ideas with the high school students’ ideas, however, they argued for all ideas, not wanting to let go of a student’s ideas. Their focus was still with others’ needs.
I took note that a homogenous group worked well together during the ideation process. Perhaps the cooperative dynamic was better powered by an outside force, which made a group better coalesce through responding to that outside force’s challenge. Clearly, the high school students had refocused the group’s energy towards working together to respond to this outside source – the idea connectedness – instead of becoming competitive with each other. This strategy would bear repeating, as it could open the door to working in different fields, and assist them in achieving wider connectivity, transdisciplinary work encouraging systemic thinking, an important in the ideation process.

The Takers were less interested in pushing themselves, or ideas, further. Rather than think about fresh activities or scenarios, they searched online to find some ready-made ideas, content to imitate. They also refused more collective time to move ideas, not showing any more interest than the Givers in face-to-face time. Their initial enthusiasm with the project floundered, since they did not want to invest much creative energy, but they did shoulder their responsibilities for the high school students until the end. They also argued for the inclusion of all ideas, focusing on others’ needs. I was pleased, thinking they now better understood that process was more important than product. I would, once again, be proved wrong.

**But What About Me?**

As the virtual project came to an end, the Takers’ true colours came to light. Their anger, which had obviously been simmering since the project started, reached the boiling point. They felt that I had pushed them into the project, had asked too much of them, had somehow fooled them into accepting to do it, and that the project had little room in their “education”. In fact, a student wrote me a letter that said it all.

> Avant de commencer, je veux juste te dire merci, parce que je sais que tu travailles très fort pour le programme, pour nous. Tu es toujours à l’écoute et tu nous entends quand on a mal dans la bedaine. C’est triste de voir que c’est souvent quand les choses vont mal qu’on va te parler. Donc je vais commencer par te remercier pour le chemin que j’ai fait depuis mon arrivé. Je regarde mon parcours et je me sens transformé. Je n’ai pas changé, mais j’ai beaucoup évolué. Je crois que nos projets tel CyberArts et LaTroupe ont pris le dessus sur notre apprentissage. Pour le projet CyberArts je me suis senti comme un emploieur, un emploieur qui paiye une tuition de 4000$ pour travailler. J’ai
trouvé aucunement constructive ton approche. Je comprend ce que tu as fait, mais j’ai le sentiment que les projets entrepris par le programme Arts d’expression sont d’un trop grande envergure. Je me sens comme si il n’y a aucune place pour l’erreur car les jeunes vont vraiment venir assister au festivale. Ce qui ajoute une pression supplémentaire dans tout le département et ce qui fait en sorte que notre professeur et directrice ce transforme en emploieure. Cette emploieure est tellement préoccupé par sa clientel (les jeunes du secondaire) qu’elle oublie sont autre clientel (les jeunes du programme). Le feeling que j’avais à l’intérieur c’est que j’étais utilisé pour desservir la clientèle du conseil scolaire et qu’eux était plus important que moi. Cela semble peut-être comme de la jalousie mais je ne suis pas le seul qui c’est senti comme cela.

Avec respect,

[Before I begin, I just want to say thank you because I know you work very hard for the program, for us. You're always listening, and you hear us when our belly hurts. It's sad to see that it is often when things go wrong that we'll talk to you. So I'll start by thanking you for the growth I've experienced since my arrival. I think about my journey, and I feel transformed. I have not changed, but I have evolved. I believe that projects and as Cyber’arts and La Troupe have taken over our learning. For the Cyber’arts project, I felt like a employer, an employer who’s paying a $4,000 tuition to work. I found your approach unconstructive. I understand what you did, but I feel that the projects undertaken by the Arts program of expression are too expansive. I feel as if there is no room for error, because young people will still attend the festival. This puts additional pressure on the department, as our teacher and director has transformed into an employer. This employer is so concerned about her clientele (high school students), she has forgotten her other clientele (the program’s youth). I had the feeling that I was being used to serve the school board’s clientele, and they were more important than me. This may sound like jealousy, but I'm not the only one who felt it like that.
Respectfully,]

**Shaken, Not Stirred**

I was profoundly shaken. I knew that giving was not their strong suit, but to need my undivided attention at all times? They obviously had not learned anything, but it certainly cleared up any
misunderstanding I may have had about what I thought had been a glimmer of generous spirit with the high school students; they had obviously done it to feed their ego. What was going on? I had observed how disconnected they were from their body, how they were pushing down their affect, and how volatile they could be when they did not get their way. They pushed authority away, yet when I gave them autonomy, they wanted my attention. They had a difficult time giving, yet their sense of entitlement made them want it all; they deserved it.

They were searching for the self, but one whose antennae focused on pleasure. I wished they were seeking their intrinsic motivation, fighting for agency, refusing to be victims to expectations of ‘savvy’ and genius, since it fed into their overweening sense of self-worth. Just because they were “wired”, was no reason to assume everything they did was right, and even if society were a performance-driven environment, too many years with helicopter parents and an educational system bent on praising their every effort in a well-intentioned attempt to build confidence had created the child tyrant. Lacking the critical eye necessary to gauge effort, they preferred to bully, disconnecting from hard work. Schools could not fail them, so they had never failed, and expected to continue playing the system, all the while mocking adults who turned a blind eye. All they understood was instant gratification, uncritical love, and the pleasure principle. As Csikszentmihalyi (1990) wrote,

> Pleasure is a feeling of contentment that one achieves whenever information in consciousness says that expectations set by biological programs or by social conditioning have been met. The taste of food when we are hungry is pleasant because it reduces a physiological imbalance. (…) Sleep, rest, food, and sex provide restorative homeostatic experiences that return consciousness to order after the needs of the body intrude and cause psychic entropy to occur. But they do not produce psychological growth. They do not add complexity to the self. Pleasure helps to maintain order, but by itself cannot create new order in consciousness. (Csikszentmihalyi, 1990, pp. 45-46)

**Where is Creativity in All of This?**

The First Wave had asked permission to think differently. Freeing them from this pattern had been a long process, their subconscious attachment to rules predominant. The Second Wave were guilt-free in liberating themselves from the past, excited to explore their creative powers to see into the future, perceiving exciting possibilities with technology. The Takers had selfishly
pushed the limits, but the Givers had stepped in when they went too far, negotiating for reflective thought. The Third Wave was paralyzed, with too many Takers inhibiting development in creative thinking, and alienating the Givers whose numbers dwindled. Why were there so few Givers? Had the Takers’ presence disaffected them, forcing them to find their way somewhere else, as the Takers dominated the scene, giving little space to anyone who was not like them?

The Third Wave did not ask permission, but were less free than preceding waves, as their uncertainties inhibited them from trusting. In spite of all of the resources available to them, they were continuously apprehensive and tentative in making choices, and though capable of reacting, their doing fossilized. Were these signs that they had regressed into survival mode? Was the Internet, their refuge from this face-to-face world, more and more difficult to bear? Had reverting to living in the moment, and taking care only of themselves become their modus operandi? Carr (2010) posited that the “Net’s cacophony of stimuli short-circuits both conscious and unconscious thoughts, preventing our minds from thinking either deeply or creatively” (Carr, 2010, p. 119), turning our brain into “simple signal-processing units, quickly shepherding information into consciousness and then back out again” (Carr, 2010, p. 119). The Internet, Carr (2010) continued, is “by design an interruption system, a machine geared for dividing attention” (Carr, 2010, p. 131). “Frequent interruptions scatter our thoughts, weaken our memory, and make us tense and anxious” (Carr, 2010, p. 132), while multi-tasking forces our brain “to reorient itself further taxing our mental resources” (Carr, 2010, p. 132).

Carr’s (2010) arguably most noteworthy statement affirmed that individuals were regressing to a primitive amygdala state, as we are “evolving from being cultivators of personal knowledge to being hunters and gatherers in the electronic data forest” (Carr, 2010, p. 138). Ah, I thought, biology. The brain, not able to handle what it considered an assault on its host’s well-being, was in constant flight, and its neurotransmitters were unable to produce requisite serotonin levels to deal with the informational and visual overload. As Carr (2010) contended, though research showed that “certain cognitive skills are strengthened, these tend to involve lower-level or more primitive, mental functions such as hand-eye coordination, reflex response and the processing of visual cues” (Carr, 2010, p. 139). Was the brain devolving, which could explain a flattened affect, an unwillingness to work either collectively or collaboratively, and an inability to take responsibility for action? Was the brain so overwhelmed, it was reverting to pre-history functions, more concerned with survival than higher thinking?
New Awareness

Though the students’ final reaction to the project was discouraging, the project’s process provided me with new insights about creative thinking. The school board, which had accepted to partner with the program, had supported my vision, as anxious about their students, as I was for mine. Its administrators were also searching for better tools to reach a digital generation. Their support and my active exchange with them reassured me, and revealed how important it was to demystify creative thinking. Their high school students were the next postsecondary clientele; their elementary panel students were the next high school clientele. They obviously thought their students needed to participate in experimental projects like Cyber’arts and Express’arts, hoping to gain some insight into new teaching tool to better reach them.

Additionally, the high school students involved in the project were not necessarily arts students, but they had greatly benefited and grown from this endeavour. Creative thinking was a tool that needed to reach out to more students in all fields. I had certainly experienced this factor when students from other fields signed up for my creativity classes; it was no different at other levels. I reflected about learning to create with multiple participants from various backgrounds, which had opened my students to a new world of references, leaning that all could contribute if the context were provided. For the creative process, this also meant a context to move toward wider connectivity, since I had observed participants concentrating on the evolution of the idea, setting aside, if for a moment, competitiveness and negativity. I knew that I would have to contend with strong egos to get my point across.

Hijacking the Imagination

In spite of the Takers’ decidedly mixed reviews, the Givers still maintained that they had enjoyed this new adventure, saying they had been made aware of how the Internet was forcing change in not only the physical world, but also their values and knowledge systems. They said they were acutely aware to phenomena related to globalization, system thinking, tolerance, and collectivity, and were appreciative of an experience that had moved their creative thought process to another level of thinking. They had enjoyed discovering how to manage a virtual project, though they noted that the technical challenges often overwhelmed their need in accomplishing a good job. Needy for personal attention, the Takers made it clear they were upset at having to give to others,
and felt used by a project that was too much a job that should not be part of their academic experience.

As a result, I kept the virtual project going for the next two years, but downsized it annually, since students were still regressing; it became just another activity in creativity classes. I had agreed with students on one point: the level of sophisticated technology required was not in hand, and there unquestionably was no real money on either end to purchase cutting-edge equipment. I was disappointed that I could not pursue the project with as much vigour, but my students were happier, having won, they thought, the battle. They were certainly not inclined to tell me that equipment did not matter, and that the process did.

I could not, however, just let them wither on the vine. Web 2.0’s primarily user-oriented on time global delivery of content, or resources, was shifting the Internet, and creating “produsers”, whose user-led content creation was involving process and product. Waiting for technology to reach the necessary standards to leap into this sphere of co-creation, and the promise of Web 3.0, was unthinkable. I reinstated the focus of exploring students’ voices within the practical laboratory work, hoping the special attention in finding new ways to encourage collaborative work would prove beneficial.

**On a Side Note: Express’arts.**

Observing the benefits of working with online interdisciplinary partners, I decided to offer a summer camp for the school board’s children, aged 9 to 12 years, which would enable me to foster creativity in a constructive manner, and reach more youth. I opened up the jobs to those in the program interested in working with children. Notably, only the Givers applied. I was thrilled to have the opportunity to teach the Givers how to apply creativity in different contexts, and open their eyes to the potential of creative thinking in conceptualizing and managing projects, and ultimately, to plant the seed that creative thinking was a tool applicable to all endeavours. The camp was so successful, children, and parents, fought for one of the limited spaces. Children often reapplied, and additional weeks had to be added to accommodate all the requests. It ran for two more years, until there were no more Givers to take the jobs. I cherished the experience, as it moved creativity out of its claustrophobic closet of being the muse exclusive to the arts.
A Leap into Creative Digression

As the students moved more and more toward the Internet, face-to-face work was increasingly difficult, students lacking in dynamic bodily energy and concentration. I learned a daily lesson. For example, as students utilized visual research to discover their areas of interest, to then move into physical and verbal improvisation to develop content, they were increasingly caught in stereotypical, or TV land ideas. Exploring new arenas of thought was not happening. Observing that making interesting or unusual links between distant ideas was difficult for them, I introduced Buzan and Buzan’s (2003) concept of mind mapping to help them visualize the snippets of information and ideas they produced, and then worked with them on making connections.

La méthode heuristique est un outil pour la mémoire ainsi que la pensée créative (...) Les schémas heuristiques [sont] un outil de réflexion très performant parce qu’ils me permettent d’esquisser les grandes idées et de voir rapidement et clairement les relations qu’elles ont les unes par rapport aux autres. (...) Cette méthode me permet d’assembler et d’affiner mes idées sans perdre un temps fou à rédiger brouillon sur brouillon. En dissociant réflexion et rédaction, je peux réfléchir avec plus de clarté et de recul. (Buzan & Buzan, 2003, pp. 12-13)

[The heuristic is a tool for memory and creative thinking (...) Heuristic patterns are a very powerful tool because they allow me to outline the main ideas, and see quickly and clearly the relationships they have with each other. (...) This method allows me to assemble and refine my ideas without losing a lot of time writing draft after draft. By separating thinking and writing, I can think more clearly and with hindsight.]

By putting their collective working memory in front of them, they could collectively see, and better link, the ideas, find new relationships, and explore patterns to push the ideation process to another level. I noticed mind mapping provided them with a method, by which they did not have to retain all the ideas to make the associations and connections they found difficult. At the very least, engaging in the process of linking outside the brain, gave them visual cues on which to focus, and extended their level of concentration. To assist them in finding interesting and unusual links, and achieve more depth, I encouraged them to use mind mapping to illustrate what they could learn from macrohistory, an area of study which focused less on details, and more on the overall patterns and stages, allowing them to distinguish between what were mere perturbations
and what were genuine historical transformations. In this manner, they could gain insight into the human condition, help explain the past, present and future, and to a certain extent, predict the movement of units through time.

The students’ global strength, neither panicking nor stressing when confronted with a problem achieving a goal, fascinated me, though the Givers responded by redoing to correct a discrepancy, while the Takers simply wanted to move on. I would have to remind the Takers over and over to try again, their inclination to just “click” through to the next idea, as though an idea were a Web link, which, when boring, was abandoned. Detail work was definitely not their forte, and as usual, they had little interest in working on deeper connectivity unless I insisted. Reaching for an easy and fast solution was their pattern. Furthermore, the general inability to write, exacerbated by their inability to think beyond the first few levels, resulted in soap opera storylines in which both the intrigue and depth of character were superficial and predictable.

Additionally, their choice of themes, increasingly dark, expressing a general malaise, loss of meaning, and hopelessness about the future, alarmed me. In one show, the characters were so troubled with their present life they sought refuge in a virtual place, free from life’s pain, hypocrisy, and hatred, expressing repressed feelings of hatred and revenge, some willing to freefall to not return to reality. In the process, they also took the opportunity to throw a few rocks in my direction, disrespectfully uninhibited by their entitled mindset. I had dared to force them to move beyond their pettiness, and since I had not heeded their warning, they were getting in a final public shot, but the worse was yet to come. I had to stick to my principles, however. This was their show. I could not – would not – censure their thoughts, still adhering to the notion that self-expression would free them. Little did they know how they would later be manipulated by outside forces, though they will never admit someone else assumed control of “their” thoughts.

**Excerpt from 2007 Show.**

*Personnage E:*

*L’Atman c’est un lieu où tu as la chance de vivre un high, de te laisser aller, d’aller au max. (…) C’est une place à quelque part où rien va nous agresser.*

*Personnage X:*

*Vous êtes un groupe de fucking idiots! Pis pire que ça encore (…) you’re all just a bunch of wasted human flesh! (…) Tu penses pas que faire semblant d’être gentil c’est d’la marde?*
**Personnage Y** :

*Quoi! Elle va nous apprendre comment donner des ptits M. et des ptites Mme qui se tiennent ben en ligne et qui font rien quand ils se font chier dessus. Ben fuck that moi je m'abaisse pas pour faire plaisir aux autres, ça c'est de la bullshit. J'prendrai pas d'insultes ou de marde parce que tout ce qu’ils m’ont donner vaut pas une cenne.*

**Personnage A à Personnage B** :

**Personnage A** : T’é fou? On pourrait être pris ici/tte pour toujours!

**Personnage B** : Je vois pas le problème. Je croyais que l’Atman c’était une place merveilleuse pour toi?

**Personnage A** : Non mais calice, tu comprends pas, je veux pas rester prise pour toujours! Imagine pu jamais pouvoir voir (...) pouvoir faire (...) pouvoir être.

**Personnage B** : Tout ce que tu veux est ici. (...) T’as même pu besoin de chercher quelque chose sur laquelle cracher ta rage. L’Atman s’en occupe.

**Personnage C à Personnage D**

**Personnage C** : Tu t’en rappel tu quand on était jeune.

**Personnage D** : Ce n’est pas le temps de niaiser.

**Personnage C** : On là trouvé. Tu t’en rappel, toute les couleuvres, tous les personnages (...), tous le paysage...

**Personnage D** : Y’avait pas de cirque. (...) Il faut que t’arrête à te faire à croire.

**Personnage C** : Maman est dans les aires entrain balancer sur la plus haute des balançoires. Elle se prépare à faire une culbute.

**Personnage D** : Ça n’existe pas, tu vas... tu comprendre ça s.v.p. Tu vois ce que tu veux. Chu drette ici, pis tu ne me vois pas.

**Personnage C** : On entend la musique.

**Personnage D** : Non! Il n’y a pas de musique, c’est vide, c’est noir. Comme ça toujours été. (...) Maman n’est plus là. Papa t’as fait mal (...)

**Personnage C** : Sur le pont d’Avignon on y danse, on y danse... Je veux voler. On n’y danse (...) comme un oiseau. On y danse (...) me sentir libre sur le... J’ai peur... pont... saute... d’Avi... saute... go on... oubli tout...

**Person E**:

The Atman is a place where you have the chance to experience a high, to let yourself go, to go to the max. (...) It’s a place somewhere where nothing will attack us.

**Person X**:

You are a group of fucking idiots! Worse than that (...) you're all just a bunch of wasted human flesh! (...) Don’t you think that pretending to be nice is shit?

**Person Y**:
What! She will teach us how to give little misters and little ladies who stand in line and don’t do anything when they get shit on. Well fuck that I’m not going to stoop to please others, that’s bullshit. I won’t be insulted no insults or shit on because what they gave me is not worth a cent.

Person A to Person B:
Person A: Are you crazy? We could be stuck here forever!
Person B: I don’t see the problem. I thought the Atman was a wonderful place for you.
Person A: No, but Christ, you don’t understand, I don’t want to be stuck forever! Imagine never been able to see (...) to do (...) to be.
Person B: Anything you want is here. (...) You don’t even have to find something on which spit out your anger. Atman will take care of it.

Person C to Person D
Person C: Do you remember being young?
Character D: This is not the time for foolishness.
Person C: We’ve found it. Do you remember all the snakes, all the people (...) all the landscapes?
Character D: There was no circus. (...) You have to stop making you believe.
Character C: Mom is in the air enthusiastically swinging on the highest swing. She is preparing to do a somersault.
Character D: It does not exist, will you not understand that? You see what you want. I’m right here., and you don’t see me.

Person C: We hear the music.
Person D: No! There is no music, it's empty, it's black. As it always was. (...) Mom is gone. Dad did you wrong (...)
Character C: On the bridge of Avignon everyone is dancing ... I want to fly. We are dancing (...) like a bird. We are dancing (...) to feel free ... I’m afraid ... bridge ... jump ... jump ... of Avi ... jump... go on ... forget everything ...]

In a later show, as an epidemic threatens to kill everyone, the characters become aware of the passivity with which they have lived their lives, never pursuing their dreams. They argue about who should live or die, because there were not enough antidotes for everyone. On the surface, the text explored the students’ need to stir out of their torpor, and stretch, but it was just a presentation of their first-held confusion, and did not move on to a true examination of why they were torpid. They were not ready to take responsibility for their actions, or rather, their inaction, and went round and round the issue with the usual platitudes.
Excerpt from 2008 Show.

**Personnage X :**

*Tu veux même pas me le donner parce que tu m’aime! T’essaie juste de te racheter pour c’qui té arrive dans le passé! Pourquoi est-ce que tu peux pas juste lâcher cette ostie d’obsession! Tu voix pas que c’est ce qui venait entre nous deux. Tes regrets, j’m’en fou bien. Je vais pas le prendre l’antidote.*

**Personnage Y :**

*Tu pense pas qui est trop tard? Comme bcp de notre vie c’est écrouler. Pis en plus avec cette événement, la vie est terminer. Te pardonner serais tellement trop facile pour toi, j’voex pas juste de dire j’te pardonne pis que tu meurt la conscience tranquille*...

**Personnage Z :**

*Tu ment! Ça se peut juste pas! non j’ai encore toute ma vie à vivre. J’ai besoin de chanter, j’vais acheter le bar...yé pas trop tard...*

[Character X:  
You don’t even want to give it to me because you love me! You’re just trying to redeem yourself for what happened to you in the past! Why can’t you just let go of this fuckin’ obsession! Can’t you see that’s what was coming between us? I don’t care about your regrets. I will not take the antidote.

Character Y:  
Don’t you think it’s too late? Like a lot of our life has passed by. And with this event, life is over. To forgive you would be too easy for you, I just don’t want to say I forgive you so you die with a clear conscience ...

Character Z:  
You're lying! It just can’t be! I still have all my life to live. I need to sing, I'm going to buy the bar ... it’s not too late ...]

Ah, another challenge! (There certainly was no let-up.) Their stream of consciousness writing style, pertinent in the ideation process, was never polished. They were the proverbial hyperlink, one click away from just moving on. I had to figure out how they could achieve depth, and I started to think of concentration as a transversal activity, rather a linear one, to help visualize how to attain depth differently. I therefore started them exploring one idea by revisiting it from many different angles, but they so lacked curiosity.

Before multi-channel television, and multiplexes, but particularly, the Internet, human beings had to imagine the world, and what they could invent to make it better. The homogenized packaging of consumer media had little complexity, or depth, needing to appeal to the lowest common denominator. Students were choosing to reheat ideas, passively consuming, rather of
actively imagining. There was no ideation process, they were merely regurgitating product. As Lanier (2010), the father of “virtual reality”, wrote, our culture had become “one of nostalgic remixing where authentic first-order expression is chopped up and mashed into a derivative piece of second-order expression” (Lanier, 2010, p. 48). First-order expression, Lanier (2010) continued, “contributes something genuinely new (to) the world whereas derivative works recycle, repeat and fail to innovate” (Lanier, 2010, p. 48). Western-style thinking had certainly conditioned us to measure success by bettering others. For students, though, their access to the world also muted the possibility to be exceptional, the Internet awash with success stories from a teeming mass of brilliant, or at the very least, more acutely aware, individuals. They would prove, therefore, to be more vulnerable to outside forces, eager to be exceptional in some way.

Since most of the Third Wave was stagnant, body-, emotion-, and idea-wise, students also bristled at having to rehearse. Rehearsals were dedicated to “autobelly” sessions, research, exploration, experimentation, writing and re-writing, and stagecraft to attain quality. In general, students enjoyed the exploration and experimentation, but had little patience in working toward excellence. The Takers deplored it, and showed their dissatisfaction by investing little effort, and whinging about how the work was stealing their time. In 2009, they demanded they have more time to have fun, but their hackles would rise during one-on-one sessions to evaluate their progress, if I critiqued their work. They felt their work was good, and that I should agree with them. They also became more and more restless in working face to face, though I think they wanted to avoid having to explain their behaviour, and take responsibility for it. (I could ask some direct questions, and they certainly did not appreciate having their shortcomings revealed.)

I remember one particular evening; a snowstorm was howling, and I set up an online rehearsal. They loved it, telling me working online from home was best for them, since they could spend less time at school, and spend more time on personal activities. I had no objection to online work, and was, in fact, pursuing the benefits, but I had no illusions. While online, students could do a million other things simultaneously, obviously not spending time thinking about the work at hand, and sadly thinking that face-to-face work was unnecessary, not a particular positive mindset for students who had chosen a theatre program, but they were in the Internet’s web. Exponential technological evolution had trained them to think time was short, that there was always something new happening, which they could not afford to miss. There was a new viral video to see, a new piece of software to pirate, a new website to visit. What could they talk about
at the bar, if they were not in the loop? They would then discover clowning, which attracted them, because as the Takers professed, less writing was involved, and the emphasis was on improvisation, and a spontaneous style of movement, requiring much less rehearsal time. I also think they liked hiding behind garish make-up and costumes. The characters were not real; they were symbols, visual representations of their confusion and anger, and it all seemed so easy.

**Clowning Around**

Students followed dance and movement classes upon entering the program. Mime work, which included the styles of Marceau and Decroux, and which required intense physical training for strength, physical precision, and concentration to master highly-detailed physical works, was introduced later. Students were also introduced to Lecoq (2000) and Pochinko’s (Par, 1981) mask and clown work to enable them to discover who they were, and be themselves, as actors.

The initial neutral mask work, as Lecoq (2000) explained, was to discover the common characteristics shared by all men, while clown work brought out the individual in her/his singularity. The courses were part of the program’s focus in assisting students to fine-tune their creative instruments, body, voice, and imagination, to achieve a physical grammar to perform with clarity, provide more expressive variety, and finally, foster a great stage presence and actor complicity and connectivity in group dynamics. In the early years, students appreciated movement classes, while the Third Wave loathed mime’s intensive training sessions. They began to relish clowning, their tool of choice in developing their acting skills, and production style. This choice was an important indication of their orientation.

As a rule, as Lecoq (2000) remarked, though “every student goes through the work on clowns, very few of them will continue in this register. [Only a] few are natural comics” (Lecoq, 2000, p. 153). What was enjoyable about clown work was finding one’s own clown, as it opened a passage for actors in the exploration of their comic register, by discovering their personal weaknesses and ridiculous side, which could make people laugh. The nose, as Lecoq (2000) posited, was the “smallest mask in the world, which would help people to expose their naïveté and their fragility” (Lecoq, 2000, p. 145). In summary, the more actors were themselves in their clown state, and the more their weaknesses were shown up, the funnier they were. More importantly, an actor “must avoid playing a role, but give free rein, in the most psychological manner, to this innocence inside him which comes out when he is a flop or bungles his
presentation and (...) in doing so gives his audience a sense of superiority” (Lecoq, 2000, p. 146). Furthermore, unlike theatre characters, clowns play with their audience, not for an audience, and with the audience’s reaction.

Clown work also revolved around finding one’s walk to shed personal stride patterns. The work was “of a very psychological nature [giving] the actor great freedom in playing as they find themselves stripped of all defences, an most incredible feeling of freedom to experience” (Lecoq, 2000, p. 148). Creating clown situations usually involves a triad, or as Lecoq (2000) explained, a pecking order: the white-face clown who plays practical jokes on the first Auguste, the first Auguste who laughs at the joke to save his face, and tries to play the same joke on the Second Auguste to only by duped by him, and the Second Auguste who is the brains and commander.

I understood why the Third Wave students gravitated to clowning. As Lecoq (2000) wrote, clowning put them in touch with a profound psychological dimension. As clowns, students were not asked to observe the world, and allow it to be reflected in them with mime’s neutral mask. They were instead asked to be themselves as profoundly as possible, and observe the effect they produced on the world, their audience. It was inevitable an egocentric generation, stranded in a world too vast to make any sense of their role in it, and desperately searching for a need to feel they belonged somewhere and have some sort of impact, took to clowning.

As I observed their work, the Takers took great pleasure in playing the Second Auguste, or the white mask role, and assigned the First Auguste role to the Givers. It was certainly a conscious choice, as they had already proven they liked control. Clowning gave them free rein to be abrasive, and get away with it. However, as Lecoq (2000) cautioned, clown work moving into the psychological realm of students, teachers must be attentive, as the clown needed no conflict, being in a permanent state of conflict with himself.

This phenomenon demands care and attention from the teacher so as to avoid pseudo-psychoanalytic interpretations of the difficult psychological process the actors have to undergo. The students must be prevented from becoming too caught up in playing their own clown, since it is the dramatic territory which brings them into close contact with their own selves. In fact the clown should never be hurtful for the actor. The audience does not directly make fun of him; they feel superior and laugh, which is quite different. Moreover, the actor is masked partly protected by the little red nose. Most important, this
work comes at the end of their training, when students are used to investing themselves fully in their playing, used to knowing and showing themselves in front of others. (…) You can only be a clown when you have built up an experience of life (…) capable of expressing their maturity, their wisdom” (Lecoq, 2000, pp. 149-150).

Had clowning become a form of emotional therapy for them? Or was it an escape mechanism to not face their inability to write, concentrate, or hard work as school demanded? Was it simply because it was the theatrical form that gave them instantaneous pleasure? There usually was an instantaneous audience reaction to clowns. Was it the permission they felt clowning granted them to explore mockery without accountability? And though serious clown work is an inward process, I was unsure of students’ final motivation, but my instincts told me they were disrespecting the form, since I was not seeing the gravitas of their clown personas.

Pruning Affect

The Internet is not bad. The technological evolution is not bad. I would be remiss to not repeat my observations, however. Something was wrong. The flattened affect students were demonstrating, their lack of emotional and physical capacity, and their losing contact with the physical world was the direct result of constant interactivity with computers. They were in endless search for the next high, but in always seeking, with no goal in mind, they were numb. As Carr (2010) wrote, “the Net engages all of our senses – except, so far, those of smell and taste – and it engages them simultaneously” (Carr, 2010, pp. 116-117), but Carr (2010) continued, the “Net’s interactivity gives us powerful tools for finding information, expressing ourselves, and conversing with others. It also turns us into lab rats constantly pressing levers to get tiny pellets of social or intellectual nourishment” (Carr, 2010, p. 117). Students were addicted to the rush of the physical high, their senses fully engaged, but this intense pleasure remained ego-based, essentially technological masturbation, far removed from giving.

They were the most interactive and interconnected generation, but were self-involved, constantly checking their online accounts to stay in the loop, their status reinforced by the comments left after venting about such and such. More importantly, they had just learned to walk away, supremely easy if kicked out of a game, for example. They only needed to set up another account, design another avatar, and take on a new pseudonym, never having to deal with conflict they had not fomented. It was more difficult in class, but they managed. All they did was choose
the avatar of non-response, which I imagined as a sloth-like creature with a vulpine grin, all the ready to eat you, my dear.

They learned to skulk in the corner, waiting for the propitious moment to attack, usually a dagger in the back, used to online anonymity. They did not like the energy flow of face-to-face communication, because they would have to deal with guilt. I never assumed they were stupid, they knew their actions were hurtful to them, their colleagues, and, in the end, me. They were unwilling to read body language, because they would then to deal with anger, disappointment, frustration, confusion, and honesty. They adopted the sleepy look to fool people they were harmless, to just make them shut up, and continued on their merry way. They would not accept displeasure of any kind, merited or not. Furthermore, influenced by the media’s constant harangue about beauty, talent, the ideal person, and success, they could hide behind their monitor, and believe what they wanted, bypassing anything unpleasant encounters.

I did not think they were consciously pruning their affect; it was just the product of their lack of process. In fact, Pellis and Pellis (2009) discussed how individuals, and in my case, students, were learning “to calibrate and match their emotional reactions to an unpredictable world (…) in refining the calibration of [their] emotional skills or more accurately, in refining the calibration of [their] emotional responses to unexpected events in the world” (Pellis & Pellis, 2009, p. 162). And so, their ability to calibrate their emotions, unfortunately undeveloped, spoke to their fear of the physical world. And as their ability to concentrate, write, imagine, and create lessened, thinking also diminished. Lanier (2010) succinctly summarized the issue.

Instead of producing new works of genuine art that replenish our mental environment, we celebrate the amateur whose mash-ups may be hilarious but contribute nothing of value to the cultural conversation. (…) Great art is rare, and only so many mash-ups can be released before the original power of a truly artistic creation is lost. And without the production of authentic culture, our mental environment is in danger of becoming a clear-cut wasteland, over-farmed and depleted. (Lanier, 2010, p. 17)

With fear moving students toward a static behaviour, and complacency the end product, as Csikszentmihalyi (1990) argued, students inevitably felt that “psychic energy invested in new directions [was] wasted unless there [was] a good chance of reaping extrinsic rewards for it,
[until] one [ended] up no longer enjoying life, and pleasure [becoming] the only source of positive experience” (Csikszentmihalyi, 1990 pp. 45-46).

Survival Mode

I did not despair, not having forgotten how even the Takers had given and created with a heterogeneous group. I knew I had to move creativity away from a strictly arts-based tool to one that embraced all fields. Interdisciplinarity was the key, having seen first-hand the possibilities for youth of all stripes. As so, during my sabbatical, I initiated changes to the program’s website to better illustrate to the university community how, and why, studying creativity was important for all students, believing that the creation amplified students’ the intrinsic motivation. Beyond results, marks, and performance, they could find the desire to learn, and empower themselves. Through the creative process, students could learn to contribute to any project, be useful, and influence the course of events, a key tool in shaping the next generation at a time of great complexity and continuous change, ensuring agency. I spent a great deal of time thinking on how to better deal with students’ changing behaviours, attitudes, and thoughts, enticed as they were by the very changing definitions of time and space. As I researched technology’s influence on the brain and body, and developed the requisite tools that would enable students to deal with complexity, the community, ill-equipped to deal with the stressors, responded by contracting, and rather than rise from the ashes, born anew, decided to resist, unaware, or perhaps just simply rejecting, rigorous research, and public commentary.

The professional theatre world should have been the place to start. Live theatre attendance was falling, a plethora of instantaneous media sources and entertainment options readily available at one’s home computer, or television.

Quand aux plus jeunes, justement et aux étudiants, ils désertent peu à peu le théâtre. Seulement 27% des 15-25 ans le fréquentent en 2004, par rapport à 42% en 1997. (…) Le déferlement d’Internet et des nouvelles technologies amène le public des arts et de la culture à chercher « une flexibilité dans ses expériences, en termes de temps, de plages horaires et de produits » note M. Garon, fixés dans un lieu, à des dates précises, les arts d’interprétation se caractérisent par une certaine rigidité, « alors que les autres produits culturels nous habituent à y avoir accès instantanément ». Ces transformations profondes affectent globalement notre rapport avec l’art et la culture. La consommation rapide et
Instantanée ne favorise pas l’effort intellectuel soutenu et la lenteur qu’impliquent souvent une représentation théâtrale. (Doyon, 2007)

Youth, and students, are gradually deserting theatre. Only 27% of 15-25 year-olds enrolled in 2004, compared to 42% in 1997. (...) The wave of the Internet and new technology influence the arts and culture public to seek “experiential flexibility, in terms of time, scheduling and product”, noted Mr. Garon. With set locations and specific dates, the performing arts are characterized by an evident rigidity, “while other cultural products have accustomed us to instant access.” These profound changes are affecting our overall relationship with art and culture. Rapid and instantaneous consumption does not promote sustained intellectual effort, and a slow-moving theatrical performance.]

Even Canada’s pre-eminent theatre school, l’École nationale de théâtre [National Theatre School (NTS)], was being forced to deal with a new generation insisting on instant stardom with little effort. One must remember this school only accepted the best candidates, and had always been able to cherry-pick from numerous applications. The school had always assumed students applying for admission had the passion necessary to sweat, and the urge to exceed expectations. In 2008, alarm bells went off.

Les effets de la téléréalité ont des répercussions jusqu’à l’École nationale de théâtre. L’institution (...) a dû modifier son processus de sélection devant des jeunes désireux de devenir des vedettes instantanées plutôt que des acteurs de métier. « La téléréalité, le désir d’être connu rapidement, le besoin de passer à la télé et de faire la première page des magazines, c’est une épidémie en ce moment », estime la directrice artistique de la section française de l’ÉNT, Denise Guilbault. Elle tient à préciser que le métier d’acteur reste d’abord et avant tout une vocation. Quant à l’école, pour la fréquenter, il ne suffit pas de vouloir devenir connu. « Il n’y a aucune tolérance pour les absences injustifiées, il faut un professionnalisme, le tempérament ; la capacité d’être soumis à la critique et au travail d’équipe, etc. », poursuit-elle. Jusqu’en 2006, l’école (...) faisait passer deux auditions aux quelque 400 aspirants élèves au secteur francophone du programme d’interprétation. (...) Pour rendre plus efficace le système de sélection et éliminer rapidement les candidats envoûtés par la téléréalité et le vedettariat à tout prix, pour la deuxième année consécutive, les aspirants élèves présenteront leur deuxième scène
seulement s'ils sont invités à le faire par les juges. « Il y en avait qui venaient après avoir appris leurs textes sur le coin de la table, vous imaginez... C’est un trop grand investissement pour prendre ça avec autant de légèreté. Dès les premières minutes, on peut détecter ceux qui ont du talent. À quoi bon leur faire faire une deuxième scène? »

(Larochelle, 2008)

[The effects of reality TV are impacting the National Theatre School. The institution (...) had to change its selection process when faced with youth wishing to become instant stars rather than working actors. “Reality TV, the desire to be quickly recognized, the need to get on TV and be a magazine’s front cover, is an epidemic right now,” says the artistic director of the French section of the NTS, Denise Guilbault. She cautions that acting is first and foremost a calling. Personal recognition is not a reason to seek admittance. “Unauthorized absenteeism is not tolerated; professionalism, temperament, the capacity to be subjected to criticism, teamwork, and so on, are musts.” she continued. Until 2006, 400 students seeking admission to the French interpretation department had to audition twice. (...) For the second consecutive year, and in an effort to streamline the selection process, and eliminate candidates caught in reality TV and instant stardom’s spell, prospective students will only perform a second scene per the judges’ request. “Think about it. Some had just memorized the text. It's too much of an investment to take it so lightly. We can detect those who have talent within a few minutes. What’s the point in asking they perform a second scene?”

Fuelling the Fire

Clearly, large theatre companies, which grabbed NTS graduates hoping to spin fresh faces to entice audiences, could not be comforted by a renowned theatre school, which had enjoyed the potential of critical mass to fill its seats, openly discussing its exasperation at the dearth of passionate artists accepting the rigors of stagecraft. Smaller theatre companies therefore had their feet in the fire. Fearing extinction, and perhaps a lack of funds and vision, they reverted to a survival mode, rather than embracing change in product delivery. This seemed to be the case with the city’s professional theatre companies, as they inevitably more acutely felt the challenge of changing tastes, reduced audiences, and changes and financial pressure. Chaos running rampant, and the reek of fear permeating youth, and institutions, it was time to retreat and
observe, and to contemplate and to reflect. The fire was raging, out of control, and bent on
destroying everything in its path.

While I was on sabbatical in 2008-2009, Laurentian was hit with budget deficits, and a solution,
though not any different from most universities, was to cut back on sessional teachers. Since the
artists-in-residence were considered sessional teachers, representing 90% of my staff, the
program, though I concede other programs and departments faced similar cuts, was left with a
barebones staff. To help the program’s interim director, I volunteered time to teach some
students so they could either complete courses necessary for a diploma, or introduce them to the
creativity and visual imagery components.

The cuts were deep and abrupt, forcing the program, and many others on campus, into a
restructuring mode to better respond to the pressures of the social, cultural and economic
contexts, but unfortunately, overlooked much of the human dynamics involved, as this would
have slowed down administrative process. I was saddened, but not surprised. I had felt the
pressure from the program’s launch that if the perceived value and benefits of creativity were not
sustained in schools and in society, whether face-to-face or virtual, it would not be perceived as
essential, and would be easily set aside as dispensable.

To wit, Web 3.0 technology was already being pushed back, no matter the tools future-thinking
masterminds were producing to foster an active creative community online. The culture of
cooperation and compassionate values undervalued, users were not propelled to take it on, and
hard economic times did not augur well for a program whose core, as the creative process
embodies, was cooperation, collaboration, connectedness, self-expression, and collectivism. That
it was an arts program only compounded the difficulties, and in, as Winner and Hetland (2007)
wrote, an “educational system strapped for money and increasingly ruled by standardized tests,
arts courses can seem almost a needless extravagance” (p. 1). I was alarmed by the decision,
feeling the window of opportunity was slipping away, and though only time would tell what the
outcome might be, I could not escape an important question, “How would these decisions impact
children?

Media outcry about the impact of technology on youth, which emphasized the crux of the
disconnect between schools and the workforce, disabling society’s quest to move forward, was
on the rise. Various editorials, reports and issue briefs succinctly explicated the dilemma with

My sabbatical took on an even greater urgency, as I buttressed my observations through research and reflection. It was not a matter of seeking to stop change, but to reflect on how society needed to move out of survival mode, which impeded higher order thinking. I realigned my focus by harnessing everything I thought knew about creativity to emerge with fresh new insight. My core had not changed, I still wished to empower youth, root for their agency, and encourage their freedom of expression, especially now, caught as they were in a technology vice menacing to usurp hearts and minds, leaving them vulnerable to manipulation. I could not hesitate, the battlefield already strewn with casualties.

**A Web 3.0 Mind in a Web 2.0 World**

Stepping back, my sabbatical allowed me to gain fresh perspective on youth. I decided to write A Manifesto for the Disenfranchised, summarizing my perception of the Third Wave’s students’ demands.

We don’t want you to tell us what to do, and we don’t need you to propose directions for our projects.

We are the ones who should decide what we want to do.

We may choose to work with you, but we will guide ourselves.

We don’t want to work hard, or for long hours, because we need time to have fun, so you will provide us with flexible hours to suit our schedule.
We don’t want to be in groups for too long, as giving to each other is way overrated.

We can connect on the Internet when and how we choose and how we choose.

We don’t want to read books; the Internet is all we need.

We don’t want to spend time rehearsing, or doing detailed work.

It’s too demanding for little gain; things are always changing anyway. Experimentation and improvisation are much more appropriate.

The Internet gives us access to all different types of ideas, so we don’t need to waste time creating; it’s all there for us.

Though I concede an undeniable cheekiness, the manifesto certainly resembled a game world, a click world, one of play, and instant self-gratification, geared to product. Process was too long-term; collaboration required the interplay of collective minds working together to achieve outcomes, but it was that very collaboration that enriched creation toward unselfish co-creation. Technological pundits were hyperventilating, as Web 3.0, whose promise was cooperation, was losing steam, the iGeneration too comfortable in Web 2.0’s social networking. It had been too thoroughly embraced, and was silently stripping humanity from its building capacity, in other words, process. Social networking simply improved a friend count, and encouraged opinion, but not necessarily a collaborative spirit to positively improve society. But why was youth who had always traditionally fought “The Man”, so casually subjugating itself to Web 2.0’s consumer-driven model, over which it had little control, big business obviously paying the bills? Had the smoke and mirrors just blinded them?

Carr’s (2010) book would reconnect me with Kandel’s (2006) work about brain and memory in the last century of neuroscience research. Through his molecular biological approach, he explored how information received by our senses became hard-wired. Rereading his research in light of recent mutations in students assisted me in better understanding short- and long-term memory basics, and underlying molecular mechanisms and events affecting the formation of long-term memory, providing me with a better understanding of the changes occurring in youth’s brains through repetitive use of the Internet.
Kandel’s (2006) research proved that by probing the synaptic connections between sea slugs nerve cells, “that nerve cells alter their response to chemical signals to produce coordinated changes in behavior” (Kandel, 2006, p. 90), showing that “learning produces changes in behavior by modifying the strength of connections between nerve cells, rather than by altering the brain’s basic circuitry” (Kandel, 2006, p. 102). As such, it revealed that the cellular components of the brain do not form permanent structures, but are flexible, and change with learning, experience, and needs. Furthermore, Kandel (2006) determined that the biochemical changes that accompany memory formation showed that “short-term memory involves a functional modulation of the synapses while long-term memory requires the activation of genes and the synthesis of proteins to grow new synaptic connections” (Kandel, 2006, p. 292), and that long-term memory persists for as long as the anatomical changes are maintained. Carr (2010) took up Kandel’s (2006) research.

The influx of competing messages that we receive whenever we go online not only overloads our working memory: it makes it much harder for our frontal lobes to concentrate our attention on any one thing. The process of memory consolidation can’t even get started. And, thanks once again to the plasticity of our neuronal pathways, the more we use the Web, the more we train our brain to be distracted- to process information very quickly and very efficiently but without sustained attention. (…) Our brains become adept at forgetting, inept at remembering. Our growing dependence on the Web’s information stores may in fact be the product of a self-perpetuating, self-amplifying loop. As our use of the Web makes it harder for us to lock information into our biological memory, we’re forced to rely more and more on the Net’s capacious and easily searchable artificial memory, even if it makes us shallower thinkers. (Carr, 2010, p. 194)

If the Internet were diminishing memory, and as Carr (2010) wrote, “the art of remembering is the art of thinking” (Carr, 2010, p. 191), it was a high price to pay for its pleasures, since it affected everything related to the physical body: affect, expression, memory, and creative powers; in short, altering the very essence of what it was to be human. Simply put, youth’s minds were being reprogrammed. I also returned to Lightman (2004) who had translated the Einstein’s different concepts of time into short illustrative anecdotes, and fell upon a story, 20 May 1905, which I chose to re-title, World without Memory.
For it is only habit and memory that dulls the physical passion. Without memory, each night is the first night, each morning is the first morning, each kiss and touch are the first. (…) A world without memory is a world of the present. The past only exists in books, in documents. In order to know himself, each person carries his own book of Life, which is filled with the history of his life. (…) Without his Book of Life, a person is a snapshot, a two-dimensional image, a ghost. (Lightman, 2004, pp. 82-83)

Shivers ran up my spine. Indeed, they were snapshots frozen in time, two-dimensional beings living in the ether, and ghosts floating in the miasma of discontent of a world of automatons and clones. As I observed the capacity building for process being stripped from youth, and their creativity come to a screeching halt, I came to the conclusion we needed to take a closer look at creativity, and its Western-based definition. We had been deluded by Big-C and small-c definitions, society backing away from creativity’s true meaning, as it would certainly disrupt the economic model upon which it had built its social structure. If creativity had lost its original definition, it had certainly lost its original purpose: to create. Creativity was much more than an individual process in search of innovative and novel ideas, it was about process that built human capacity of collaboration, and higher order thinking.

**Filling the Gaps**

What observations from the Third Wave could assist me in uncovering the gaps that needs to be filled in order to connect anew with this new generation of youth who were immeasurably different from me – from us? I began by focusing on the Givers and how they had contributed in illuminating new findings about creativity. Working with the Givers, ever more ready and willing to work on a deeper level of interactivity by integrating their mind, body and affect abilities to foster deeper connectivity, I had noted how were beginning to synchronize their bodies to keep in tune with each other’s state of emotion. Their physical openness let them tap into each other’s thought processes, so they were able to generate a much richer exchange of ideas. They were able to move much quicker towards wider connectivity, and produce more novel ideas. It felt as though they were one voice, assembling and connecting ideas, providing little explanation along the way, while clearly understanding each other’s burst of sentences, which they seemed to complete for one another, excited by each one’s input. In fact, an outsider
looking in might only have observed a group working hard to sustain a high level of energy upon which they aligned and fed to achieve wider connectedness.

Thinking back, it was not the definition of creativity that helped me get students excited in learning how to foster creativity; in fact, it had the opposite effect. As I first ventured in teaching creativity within classroom and laboratory contexts, I discovered over time that something was not quite right with the commonly accepted definition of creativity which refers to an ability to find novel and useful ideas. That is not to say that the outcome of creativity did not give rise to novel and useful ideas, it simply meant that from the First Wave on, the struggle to fill their self-perceived mandate to generate original ideas was too high-flying for students, and inevitably, an unrealistic mandate. As they tried, and expected to immediately find original ideas, they were unable to reach this self-imposed objective, not having the requisite thinking mindset, and the necessary thinking skills, attitude and aptitudes to access and apply their creative thinking fruitfully, creativity originating from a different organizational thinking culture which they had not developed. As a result, creativity embedded in their minds as an activity, which identified individuals with special talents or geniuses, they became discouraged, not feeling they could achieve the promise of the definition I presented them. It was like I had them at the wheel of a Formula 1 car in a cutthroat competitive race without their knowing how to drive, not a good thing as I wished to empower them, not crush them.

To deal with this issue, I chiselled away at creativity’s most common definition by shifting my focus away from the end result, or outcome (product), drilled into our minds by the most popular definition of creativity, as “something novel and useful”, and applied de Bono’s (1992; 1994) research to explain the differences between logical (vertical) thinking and creative thinking (lateral or parallel) to bring students, at least for the moment, to think about thinking rather than the product of thinking. These teaching moments were usually followed by deep silence and focused attention. When their eyes refocused, something had clicked, and they became not only increasingly interested, but relieved in discovering a new way of organizing what they were feeling, and making sense of it. It seemed as though thinking about thinking gave them the necessary distance to be able to reassess what they were feeling and change the colour of their emotions, and enabled them to move away from fear-based emotion, which usually surfaces at the onset of anything unknown to protect us. They discovered a new facet about themselves that they had never considered before, which, in turn, provided them with the motivation to achieve
the new tasks at hand, better understanding the aptitudes, attitudes and skills needed to get there. They were discovering the tools, which could give them agency of their various thought processes.

**Revelations**

**Revelation 1: Have We Been Missing the Point?**

Learning the science, or the mechanisms of the mind, helped them tap into their creative thinking. Objectivity, or the logic of science, freed their subjectivity (imagination) by calming their affect, giving them the tools to revisit the emotions that coloured their thought, and readjust their affect to the context, moving away from fear, the first emotion that arises in uncertainty. As such, could the systematic teaching of amalgamating, or integrating, imagination and science become a tool to better manage the colour of emotions, and assist them in better orchestrating, or calibrating, various brain processes to more easily access higher order thinking?

As I progressively introduced the steps to students over the years, the foundation of creative thinking’s organizational culture, which embraced perspectives, possibilities, and wider connectivity, and involved moving through chaos, change, and unknown territory while feeding on cognition, imagination, motivation, emotions and intuition, I witnessed how learning the various elements of creativity were building capacity for process. It was process that moved towards the human capacity for collaboration: the interplay among collective minds, working together to achieve new outcomes, ideas and goals, rather than compete to be better than others, our present societal economic model. As such, this taught them how intrinsic motivation versus extrinsic motivation powered process, which, in turn, enabled each participant to have the determination to work hard to achieve a vision, as one’s contribution, no matter how big or small, assisted in provoking thoughts and ideas beyond the expected and predictable.

**Revelation 2: Have We Been Blindsided?**

If the Western definition of creativity had co-opted the original definition, serving historical perspectives, and the associated beliefs persons held, society simply grew to accept these paradigms as universal truths. After all, worldviews were based on science, a discipline, which aims to explain the laws of nature based on physical causality. Since the ultimate goal of science
is product, creativity was defined with that same intent in mind, achieving a novel and useful product. What is missing from present-day science is the notion that the universe is much more than the physical; it includes those intangibles realities used to express human experience that cannot be measured by ordinary means, or mathematical treatment, like imagination, play, intuition, human relations, ideas, values, dreams, emotions, creativity, aesthetics… all that brings meaning to physical life.

Since creativity teaches inclusion not exclusion, welcoming rational and irrational thinking processes to move alongside each other, new insights and understanding into our reality come to the fore. Creative and learning processes, therefore, better enable us to embrace the contradictions, which face science (from contradictions to paradox) without fear of these unresolved issues.

Had individuals’ focus on creative and scientific thinking’s product blinded them from seeing how joining both processes produced the tool necessary to calibrate and more effectively translate the language of emotions to achieve higher order thinking? And again, could the systematic teaching of amalgamating, or integrating, imagination and science become a tool to better manage the colour of emotions, and assist them in better orchestrating, or calibrating, various brain processes to more easily access higher order thinking? Indeed, when the Givers came out of the ideation phase, and were faced with choosing from the panoply of ideas they had generated, all would be lost, as they reverted to arguing on who had the best idea. Emotions once again ran rampant, the right answer needed to bolster to feel good about oneself, become a success, destroying all others on the way to the top.

**Revelation 3: Have We Been Purposefully Dividing to Conquer?**

Could focusing on a right answer, as taught through society’s argumentative organizational, and its view of a fragmented world, blinded people to ignore connectedness, the tool to assist us in managing our emotions, and enabling us to appreciate each one’s contribution to achieve wider connectedness? The Takers personified my questions with regards to creativity. However, writing about them requires looking at the impact of technology on them. When the program opened its doors, Gravel and I believed it would provide a milieu in which students could experience, and put into practice, the theoretical principles of creativity to be taught in creativity classes, and live the collaborative dynamic necessary to gain better insight and understanding.
into the unexplored terrain of creative thinking, as well as reflect upon the mind’s productive capability within a context of juxtaposition of different minds. In trying to develop the First Wave’s creativity, and have them see themselves as designers, conceptors who develop projects, and interpreters who execute projects, however, I discovered that they did not sufficiently developed the appropriate brain functions to do the work. I embarked on a journey to assist them in developing these new skills, thus creating a parallel mindset to their logical thinking process.

As the Second Wave flowed into the program, the technology permeating their lives seemed to assist me in teaching creative thinking. Firstly, technology’s exponential infiltration introduced changes that began creating a mindset allowing individuals to more easily accept them. Secondly, the Internet’s democratization of information assisted me in opening youth’s minds to possibilities and perspectives. They understood one right answer was nonsensical, as they had available at their fingertips, 24/7, a deluge of digital information that constantly changed; possibilities and changing realities more a part of their world than certainties and absolute truths, and the Internet, rather than teachers, the fountain of knowledge (Tapscott, 2008). Thirdly, the online navigational system moving away from linear processing assisted me in having youth learn to think through chaos, change, and the unknown, and make new connections among various information. To wit, the online navigational system with features like hypertext, search keywords on Google, and clicking, cutting and pasting introduced to help organize the volume of continuously changing information helped me teach students how to think in a nonlinear fashion. In fact, the Internet’s new organizational format introduced more intuitive surfing, allowing users to organize and give meanings to actions, instead of the system providing the direction of the interpretation of their search. As such, they had the control to decide the order of what they read, and when they choose to do so. Interestingly, as Prensky (2000) noted, youth thought differently from the rest of us. They developed hypertext minds, and leapt around, as though their cognitive structures were parallel, not sequential. Fourthly, the Internet and video games, which fostered interactivity with others, had also moved this generation into enjoying connecting with each other and sharing content. As such, computers and various media technology assisted me in bringing students to peep into the virtual imaginative world of creative thinking, as well as the physical material world of logical thinking, giving them a taste of what it meant to exercise agency and control of their whole thinking and learning processes, most important as one developed creative thinking.
Revelation 4: Has Society Hijacked Creativity?

However, the wonderful partnership between technology and the teaching of creative thinking suddenly and mysteriously ceased, as the Third Wave made their way into the program. As an excessive use of technology increased in youth’s lives, their mindset’s development, upon which I had built to expand their thinking, surprisingly regressed. As these young Digital Natives continuously wired up for rapid-fire cyber searches, the neural circuitry and some parts of the brain that normally adapted to more traditional learning methods were less developed (Small et al., 2008), and I witnessed the crippling of student capacity to build up their creative thinking.

I witnessed how the excessive use of the Internet and associated technology were altering the human mind, body and spirit. Students’ physical alertness numbed, a sedentary physicality causing a disconnect between mind, body and affect that left them ill-equipped to read each other’s body language for effective communication. Their affect flattened, as though they were intentionally pruning it, though I did think the pruning was more an unconscious result, and human interactivity became static and fear-based, rendering them unable to trust what they saw, or heard. As the ocean of information around them made them more aware that there were few certainties, only possibilities, their long-term memory capacity, pruned by an excessive use of short-term on demand Internet to-and-fro clicking, descended into intellectual shallowness. And as the Internet’s underlying tenets did not generally sustain human compassion, and rather egocentric and materialistic values, the preferred pattern of behaviour was personal pleasure, not societal responsibility. As such, the desire to create was just too much effort, and too complicated and removed from their sheltered and protected existence on the Internet.

Revelation 5: Have We Been Raised to Use our Brain at Half Throttle?

Was the Internet the best variable in discovering how both thought and affect were necessary to enable reflection and creativity? Could the Internet be part of a Machiavellian plan to purposely keep the masses in the dark, unaware of their underdeveloped brain, not being made aware of how to develop whole brain capacity, to better able manipulate thinking or feeling minds? Agreed, the question is presuming too many unfounded assumptions, and I am not a Luddite, bemoaning technological advances, but there is a case to better utilize its applications on humanity.
The use of the Internet opened the door to creative thinking, but the mind, so enthralled by exponential overuse, had deteriorated. Why does society, however, push consumerism, even as we witness it abating capacity in youth, as more important than compassion? Certainly, it is so much technology, but society’s economic greed, and its desire to supersede other countries that take precedence over humanitarian needs. What, then? Machines to outsource memory to further empower an elitist group?

**Ideating the Impossible**

Why bypass our organic intelligence, and empower machines without exploring a person’s full potential? If online consumerism were replaced with compassionate values, wherein sharing and caring for others existed, would people be able to co-create and unlock the key to tapping into collective memory and intelligence? Imagine biological minds working collaboratively, instead of competitively. What new powers would result? As I see it, the Internet’s biggest lesson is youth love the virtual world, but are woefully ill-equipped to deal with emotions face to face in the physical world. Why aren’t we researching how to manage emotions to heighten the full spectrum of intelligence? Stress, depression, burnout, suicide, apathy, discouragement, giving up, aggressiveness, and despair are signs that we need to upgrade the amygdala, which has not evolved since cavemen faced the fear, and vanquished the first woolly mammoth. Yes, fear protects us from leaping off tall buildings, but in this modern world, varying degrees of fear need to be taught, as serotonin levels are being depleted at an exponential rate as the merry-go-round of abject fear consumes society. We are putting all our energy in the evolution of machines. Is it not time to reconsider human evolution?

We should open the door to true collaboration, which values compassion, and teach youth to deal with conflict more constructively by managing emotions, thereby creating integrative holistic-thinking minds, ones that are biologically able to connect to achieve higher order thinking, so why are the doors closed? Could it be that encouraging a collaborative world force would counteract the values of a competition- and economics-based world, one that society promised would release individuals from bondage?
Manifesto: Moving Away from a Zombie Mentality

Our moral responsibility is not to stop the future, but to shape it. As such, I believe we must take part in channelling our destiny in humane directions. Machines are all well and good; as long as they remain an extension of our biological potential, not participate in its eradication. We cannot let technology alone shape our future. We need to awaken from this bits and bytes zombie phase, and so, I propose we think about the fundamental learning that needs to be acquired outside digital media. We urgently need to redesign our values, attitudes, and priorities to better assist children. To that end, I have devised a personal manifesto, The Bridging Manifesto.

1. Youth require thinking tools that allow them to achieve mastery over their brain, so they learn to live beyond a basic survival mode.
2. Students must learn to regulate their behaviours in our providing affect-laden tools, enabling them to self-monitor and execute control over performance. They need to master both body and brain to manage biological imperatives, so they have the power to overcome technology’s assault.
3. New models of understanding are required to lead youth to a new definition of success, one whose approach integrates the arts and science, thereby providing them with the conduit to managing emotions, and achieving higher thinking order.
4. Youth’s creativity must be developed, enabling them to experience process that leads to collaboration and collective intelligence, the necessary tools from which they can learn to meaningfully synthesize the ocean of information.
5. Youth requires mastery over life choices, providing them with the agency to transform from being victims to being masters of their fate.
6. Interactive activities like think tanks that foster a thinking continuum, rather than ego-based interactivity that pulls or pushes energy, which reinforces fragmentation, opposition, and competition, must be prioritized.
7. A pedagogy of change needs to be encouraged among teachers, who should consider not only numeracy and literacy, but also operacy, and teaching that values the humanitarian ideals of compassion and generosity for others.
**Renewing my Vows: Tales of Chiaroscuro**


For that would imply that, spiderlike, I have somehow spun a web solely from the stuff of my own being. When, in fact, I cannot exclude the contexts of gender, sibling and maternal relationships, political and professional phenomena, and even aging and decline from “myself”. I am not so “individual” that I can claim to be free from the shaping influence of contexts. Nor can I forget that, conscious as I have tried to be, I have lived inside a whole variety of ideologies and discursive practices, in spite of trying – through resistance and critique – to liberate myself. I return to my “site, the soil of (my) sensible and opened world,” associated bodies must be brought forward along with my own, “the “others” along with whom I haunt a single, present, and actual Being” (Merleau-Ponty, 1964, p. 168). On the original landscape where an individual is grounded, where her or his life began, there is always a sense of consciousness being opened to the common. When we are in the midst of things, we experience objects and other people’s actions corporeally and concretely. And despite the distancing and symbolizing that come later, the narratives we shape out of the materials of our lived lives must somehow take account of our original landscapes if we are to be truly present to ourselves and to partake in an authentic relationship with the young. As I view it, it is on that primordial ground that we recognize each other, that ground on which we are in direct touch with things and not separated from them by the conceptual lenses of constructs and theories. (Greene, 2000, pp. 74-75)

In some strange way, by grasping them (childhood memories and past experiences) by making these events objects of my experience, I have imposed my own order, my own context, as I have pursued my own adventures into meaning. The narratives I have encountered in my journey have made it possible for me to conceive patterns of being as my life among others has expanded: to look through others’ eyes more than I would have and to imagine being something more than I have come to be. (Greene, 2000, p. 85)
If nothing else, my journey has allowed me to clearly identify the guiding principles that will influence my teaching, my hard-held belief that I must walk them into the light. The First Wave students took my hand, and accompanied me into the light. Though I extended my hand to the Second Wave students, some slipped away into the shadows. I tugged on Third Wave’s students’ hands, but they did not, or could not, want to move into the light, and remained fixed in the dark.

Even though youth are presently unable to move, I hear their cry, a sorrowful wail, as stretched out to maximum capacity, they cannot even walk. I vow to relieve their mental and physical stress by conceptualizing the tools to light their way, the life-giving flint they will use to ignite the flame of passion that will feed the fire of human agency and expression. I commit to remaining an active lamplighter on their educational path, no matter the price, much like de Saint-Exupéry’s Fifth Planet’s lamplighter.

Now that man, the little prince said to himself as he continued on his journey, that man would be despised by all the others, by the king, by the very vain man, by the drunkard, by the businessman. Yet he’d the only one who doesn’t strike me as ridiculous. Perhaps it’s because he’s thinking of something besides himself. He heaved a sigh of regret and said to himself, again, That man is the only one I might have made my friend. But his planet is really too small. There’s not room for two... (de Saint-Exupéry, 2000, p. 43).

I commit to find the light that guides to greater connectedness in individuals, as I believe that one day, it will no longer be a lonely journey.
Chapter 5
From Theory to Practice

Committing to finding that light required that I broaden my view. Research clearly evidenced that youth’s technological addiction was influencing rapid brain evolution, and exploding the frontiers of the right brain’s visual and multimodal abilities. With youth’s brains processing information differently, students were not connecting in the way one conventionally thinks is appropriate for learning, engaging, and the creative process.

Though fleeting, there were moments when my students and I connected, but how had we achieved that authentic connectedness, which I define as the mode of interactivity between people that embraces both the engagement of cognitive knowing, and the affect and intuition of subjective knowing to create meaningful relationships through deeper understanding of self through self, and self through others. What was the common denominator of higher connectedness that would reveal how to shape pedagogical practice to reflect a deeper meaning and understanding of youth’s changing behaviours due to the emergence of the new paradigm steered by the proliferation of technology, and ultimately enable ‘better’ teaching leading to ‘better’ learning?

In essence, fostering the authentic connectivity essential to our humanness requires that pedagogues rethink the education system’s ideological constructs to develop a new comprehensive philosophy of education, and in the process, revisit the “fundamental goal of the process” (Lloyd Yero, 2010), the very purpose of education. There is, however, no one definition of education upon which all agree, because “once we get beyond a dictionary definition that is often of little practical value, the meaning we assign to a word is actually an expression of a belief, not an absolute fact” (Lloyd Yero, 2010).

Reflecting on Curriculum Design: Rethinking Ralph W. Tyler

I began my inquiry by reflecting on Tyler’s (1969) definition of education, and his approach to curriculum development, because, as Jackson contended, Tyler’s rationale became the “Bible of curriculum making” (Jackson, 1992, p. 24). I do subscribe to Tyler’s definition of education as a “process of changing the behavior patterns of people. […] to include thinking and feeling as well as overt action” (Tyler, 1969, p. 5).
This, however, begs the question: How can an educational institution presume to think it can control the process of youth’s changing behaviours when it can no longer claim to hold the ultimate truth, since truth is fluid, the Internet providing alternate, and constantly shifting, schools of thought?

This question sets aside the process of modifying behaviour via a fixed scenario, that upon which conventional curriculum design excels. Pedagogues must rather assist youth transform their behaviour by considering the import of context, and how it transforms content, so to learn to adapt fluidly to change with its multiple perspectives – all the better to assist them in finding new meaning, and understanding, to their existence.

Rethinking curriculum design, and in my context, the curriculum presently taught to teachers-in-training, brought me to Tyler (1969) who posed three questions I consider vital in the development of a revitalized statement of philosophy for education.

What is the nature of a good life and a good society? Should the school develop young people to fit into the present society as it is or does the school have a revolutionary mission to develop young people who will seek to improve the society? Should there be a different education for different classes of society? (Tyler, 1969, pp. 35-36)

**Tyler’s First Question: “What is the Nature of a Good Life and a Good Society?”**

**Approaching the Question.**

Answering this question, however, first requires a deeper level of interrogation: What it is to be human in the digital era? Or, more precisely: What value should curriculum design attribute to the subjective state of human behaviour in the classroom, as this very constituent in today’s human makeup, which I identify as authentic connectivity, is challenged by both technology and neuroscience? Society is at an inflexion point, in the crosshairs of technology’s algorithms. As they regulate our subjectivity, arguably, our humanness, we surrender our power. The crux is to develop tools that tap into human power, thereby keeping machines as an extension of biology, not a replacement.

Mindful that cognitive science and neuroscience are significant in curriculum design, the humanist in me, however, believes that decision-making cannot rely on what Dewey
characterizes as an oppositional “either–or” philosophy, which assumes that it “suffices to reject the ideas and practices of the old education and then go to the opposite extreme” (Dewey, 1997, pp. 21-22). Pedagogues must steer, therefore, toward the middle ground, toward those “intermediate possibilities” (Dewey, 1997, p. 17) that exist between the opposites. “When forced to recognize that the extremes cannot be acted upon, it is still inclined to hold that they are all right in theory but that when it comes to practical matters circumstances compel us to compromise” (Dewey, 1997, p. 17).

I submit that compromise forces loss of autonomy, which is too high a price to pay for youth. Where, therefore, do Dewey’s (1997) “intermediate possibilities” exist? Simply stated, they are in the subterrains of our own biology – in our subjective self, whose existence, according to the Cartesian mindset, is a hindrance to the logical process. Grounded as the logical process is on a fragmented view of the world, it is, however, incapable of explaining the complex phenomena shaping human beings’ new perception of the world, and their temptation to adopt a ‘digital humanity’, thereby relinquishing their power to technology.

**Humanness in the Digital Era.**

A good society must therefore attend to the potential of human biology’s unattended subterrain, and promote a revised definition of the biological imperative – the idea of maintaining one’s humanity – the stepping-stone to a good life. A philosophy of education, and its adjunct, curriculum design, must consequently offer youth the tools that teach them how to be, and how to adapt behaviour to the context, which is dissimilar from telling them how to act.

In so doing, youth, who are arguably digital humanity’s early adopters, and irretrievably linked to technology, will develop the holistic values that fuel the mindset connectedness requires in finding significance in interactivity. Moreover, these values, essential to a good life, will give rise to a democracy that favours a growth hierarchy, one that moves away from a dominant hierarchy’s dependent interactivity to an independent one. The ultimate goal is interdependent interactivity, determined by context and content.

**A Subjective State of Being: Within and Without the Body.**

In describing his difficulty in obtaining research funding as early as 1973, Panksepp succinctly
affirmed, “We had to use emotional language to describe what we found, and the bottom line is we simply got rejected as being crazy” (Panksepp, in Weintraub, 2012, p. 4). He was undeterred, however, arguing that our “capacity to think is fueled by our storehouses of memory and knowledge acquired by living in complex physical and social worlds” (Panksepp, in Weintraub, 2012, p. 7).

Educators must devise a structure, or formulate a path, that allows for the subjective self’s affect and intuition to energize. Greater consideration must be awarded to the physical self, the body being the ‘power plant’ that receives, transforms, and expedites a particular environment’s internal and external energy signals, or feeling states, to the brain. The body, however, along with the affective states it produces, do not receive the status they deserve.

**Body-Brain Dialogue.**

As Coates argued, “Body and brain evolved together, not separately” (Coates, 2012, pp. 36-37), contending that the “true miracle of human evolution was the development of advanced control systems for synchronising body and brain” (Coates, 2012, pp. 36-37). Taking a closer look at the "dialogue between body and brain [will make us] appreciate just how crucially the body contributes to our decision-making, and to our risk-taking” (Coates, 2012, pp. 36-37).

To “understand the brain we need to understand movement” (Coates, 2012, p. 38) Coates contended, and described extraordinary “physical geniuses” (Coates, 2012, p. 41) who developed because they grew a “larger brain. And with that larger brain came ever more subtle physical movements, and evermore dense connections with the body” (Coates, 2012, p. 41).

We do not regard information as a computer would, dispassionately; we react to it physically. Our body and brain rev up and down together. […] I cannot emphasise it enough: when faced by situations of novelty, uncertainty, opportunity or threat, you feel the things you do because of changes taking place in your body as it prepares for movement. (Coates, 2012, p. 43)

Lastly and most controversially, Craig, along with other scientists such as Antonio Damasio, and Antoine Bechara, has suggested that gut feelings and emotions, rationality and even self-consciousness itself, should be seen as more
advanced tools that emerged over the course of evolution to help us regulate our body. (Coates, 2012, p. 48)

People, however, have been mainly disinterested in heightening their level of being. They have rather focussed on intensifying their level of thinking, in spite of “recent brain structure” (Kurzweil, 2012, p. 109) research that demonstrates that the brain’s spindle neurons’ shapes and connections “play a key role in higher-level emotions such as love, anger, sadness, sexual desire” (Kurzweil, 2012, p. 109), emotions that are part of lived, connected experiences with others.

Such “deep” interconnectedness, in which certain neurons provide connections across numerous regions, is a feature that occurs increasingly as we go up the evolutionary ladder. It is not surprising that the spindle cells, involved as they are in handling emotion and moral judgment, would have this form of connectedness, given the ability of higher-level emotional reactions to touch on diverse topics and thoughts. Because of their links to many other parts of the brain, the high-level emotions that spindle cells process are affected by all of our perceptual and cognitive regions. It is important to point out that these cells are not doing rational problem solving, which is why we don’t have rational control over our responses to music or over falling in love. The rest of the brain is heavily engaged, however, in trying to make sense of our mysterious high-level emotions. (Kurzweil, 2012, pp. 109-110)

Panksepp’s (Panksepp, in Weintraub, 2012) theory of “nested brain hierarchy” further offered that the emotional part of the brain nests in both the brain’s ancient structures, and the neocortex, the centre of thought.

Primary processes, based in deep subcortical regions, manifest evolutionary memories that are the basic emotional operating systems of the brain. Secondary processes, based on a series of way stations known as basal ganglia, are enriched with the mechanisms for learning—for linking external perceptions with associated feelings. Then on top, the tertiary level is programmed by life experiences through the neocortex, engendering our higher cognitive processes such as thinking, ruminating, and planning. (Panksepp, in Weintraub, 2012, p. 7)
Being Human.

Coates (2012), Kurzweil (2005; 2012), and Panksepp (2002) profoundly illustrate what is missing in the discussion between the body and the brain. In regards to the dynamics of human connectivity, pedagogues must move away from divorcing the subjective from the objective self, and attend to the development of tools that better assist youth to engage with subjective self, by learning to navigate the energy that defines the outcome to responses, which defines thinking, and what action follows. The development of these tools is imperative to move into what Fullan argues is the next stage of Ontario’s Education Agenda – the 6 C’s: “Character education, Citizenship, Communication, Critical thinking and problem-solving, Collaboration, Creativity and imagination” (Fullan, 2013) to ensure societal well-being.

One must firstly address the nature of interactivity, and its attendant conditions and mindsets, before the Internet’s “pack mentality” [...] further promotes [...] online “meanness”" (Lanier, in TheGuardian, 2010), which is annihilating basic humanity in favour of an alliance with machines. This leads back to Kurzweil (2012), who, in spite of his affirmation about higher-level emotions, is nonetheless enamoured by his version of efficient humanness.

   It is fair to say that our emotional experiences take place in both the old and the new brains. Thinking takes place in the new brain (the neocortex), but feeling takes place in both. Any emulation of human behavior will therefore need to model both. However, if it is just human cognitive intelligence that we are after, the neocortex is sufficient. We can replace the old brain with the more direct motivation of a nonbiological neocortex to achieve the goals that we assign to it. (Kurzweil, 2012, pp. 107-108)

What is worrisome is not the possibility of a new version of what it is to be human – evolutionary progress is desirable. What is at stake is the pairing, the perceived upgrade, of the brain with electronic networks. It is unconscionable to detach cognitive intelligence from affective intelligence. In fact, Tellier (1993) argued that rational processes, like decision-making, only function in connection with emotions and affect; the mind is not detached from the body, as computer programmers would prefer. What happens, then, to authentic connectivity, the lived experiences of our humanity, our subjective and affective world, our imagination, and creativity, if cognitive science alone guides human beings into the next century?
L’enjeu est considérable : au-delà des simples programmes de recherche techniques, les sciences cognitives sont porteuses d’un projet anthropologique, d’une nouvelle définition de l’homme. Les réductionnismes mécanistes ou neurologiques guettent. Pourtant, plus la modélisation avance, plus le modèle humain semble s’éloigner. Il est tentant de définir l’esprit, comme, précisément, ce qui manque encore à toutes les simulations. (Tellier, 1993)

[The stakes are high: beyond simple research techniques programs, cognitive science is the carrier of an anthropological project, a new definition of man. Mechanistic or neurological reductionists lurk. However, as modelling progresses, the human model seems to recede. It is tempting to define the mind as precisely what is missing in all simulations.]

**The Case for Play.**

According to Fisch & McLeod (2007), more than 70% of American 4 year-olds had used a computer, whereas by 2011 (McLeod, 2011), 92% of American 2 year-olds had an online presence. Is it any wonder that playtime is mostly non-existent, and that face-to-face interactivity is critically limited, leading to the inexorable erosion of social – and emotional – skills?

As Halberstadt and Lozada (2011) argued, emotional development during infancy and early childhood is essential to the acquisition of interdependent skills, including cognitive and interpersonal relationships. Furthermore, they (Halberstadt, & Lozada, 2011) contended that children’s ability to control their emotions in difficult situations enables them to continue to learn, and their ability to communicate their feelings to others increases the chance to fill their personal needs. Understanding what others are feeling allows children to change their behaviour in order to maintain harmonious relationships with others.

**The First Incongruity: The Lack of Cohesion**

Computers cannot attend to emotional development, however. One need only reflect on the initial promise of moving beyond Web 2.0 to 3.0, wherein the Internet would be collaboration and creativity’s ultimate tool. The promise is presently unattainable, as online conditions conducive for collaboration or creativity require positive, alliance energy, rather than negative,
confrontational energy.

Alliance energy, which elicits empathy to embrace all perspectives and possibilities without judgement, is dissipating. Confrontational energy, which awakens the reptilian brain, is terminating access to the cortex where creativity happens, and calling to action digital prophets like Lanier who “wants to subvert the “hive mind”, as the web world’s been called, before it engulfs us all, destroys political discourse, economic stability, the dignity of personhood and leads to “social catastrophe”” (Lanier, in Rosenbaum, 2013). Lanier’s representation of the “online lynch mob” (Rosenbaum, 2013), which is “enabling and foreshadowing of mob rule, not a growth of democracy, but an accretion of tribalism” (Lanier, in Rosenbaum, 2013), is chilling.

In line with Lanier’s (Lanier, in Rosenbaum, 2013) theory, youth’s display of increasingly emotionally charged behaviours and attitudes is replete with confrontational and oppositional energies driven by negative feedback when engaged in face-to-face communication. The need for human cohesion that drives positive feedback is missing. Why are youth ascribing such an affective colour to face-to-face connectivity? Herein lies the first incongruity.

It resides between Berninger and Richards’ (2002) argument that optimal learning requires that both sides of the brain work together cooperatively, and McGilchrist’s (2009) questioning of the purpose of the human brain having two hemispheres. The impact of technology’s visual world, however, strongly appealing to the brain’s reward centre, is producing a heightened, addictive state, ultimately creating a hemispheric imbalance.

**McGilchrist and Right-Hemisphere Processes.**

McGilchrist denounced society’s preconceived notions about the separation of the hemispheres by stating that “attempts to decide which set of functions are segregated in which hemisphere have been mainly discarded, piece after piece of evidence suggesting that every identifiable human activity is actually served at some level by both hemispheres” (McGilchrist, 2009, p. 1). In reality, he argued, “both hemispheres are actually involved in reason, just as they are involved in language, both hemispheres play their part in creativity” (McGilchrist, 2009, p. 1).

He further argued that the difference in the information processing abilities of the two hemispheres is “not in the “What does the brain” but in the “how”, the manner in which it does
it” (McGilchrist, 2009, p. 3). For human beings, there are “two fundamental opposed realities, two different modes of experience, that each is of ultimate importance in bringing about the recognizably human world and that their difference is rooted in the hemispheric structure of the brain” (McGilchrist, 2009, p. 3). The human world, however, “has two fundamentally different “versions” of the world delivered to us by the two hemispheres, both of which have a ring of authenticity about them, and both of which are hugely valuable” (McGilchrist, 2009, p. 5). The difficulty is that “they stand in opposition to one another, and need to be kept apart from one another–hence the bihemispheric structure of the brain” (McGilchrist, 2009, p. 5). “These are not different ways of thinking about the world; they are different ways of being in the world. And their difference is not symmetrical, but fundamentally asymmetrical” (McGilchrist, 2009, p. 31). With this in mind, I considered how each hemisphere ‘connects’.

The right hemisphere, preoccupied with “context, the relational aspects of experience, emotion and the nuances of expression” (McGilchrist, 2009, p. 93), allows “things to be present to us in all their embodied particularity, with all their changeability and impermanence and their interconnectedness, as part of a whole which is forever in flux” (McGilchrist, 2009, p. 93), the very advantages to “social cohesion” (McGilchrist, 2009, p. 26). As the “mediator of social behaviour” (McGilchrist, 2009, p. 58), the right hemisphere “sees nothing in abstract, but always appreciates things in their context, […] more concerned with living individuals than man-made objects” (McGilchrist, 2009, pp. 54-55).

As importantly, the right hemisphere specialises in non-verbal communication, dealing “with whatever is implicit where the left hemisphere is tied to more explicit and more conscious processing” (McGilchrist, 2009, p. 71). It “gives emotional value to what is seen […] which influences the meaning we find in the experiential world” (McGilchrist, 2009, p. 62).

In the absence of a functioning right hemisphere our world and our selves become emotionally impoverished. The right frontal lobe plays a supremely important part in personality, in who we fundamentally are. (McGilchrist, 2009, p. 62)

McGilchrist (2009) further argued that another’s physical presence engages the right hemisphere’s way of being in the world.

We have an unconscious, involuntary urge to imitate someone we are watching carrying
out an action, so much so that, especially if it’s something we’ve practised ourselves, the empathic entrainment is actually stronger than the voluntary desire to do something we’d like to see happen. But this is true only if we think it is a real person that’s acting. If we think it’s a computer, we just are not engaged. (McGilchrist, 2009, p. 57)

In essence, the right hemisphere is equipped to feel, respond, and interpret energy transfer between live bodies, since it is “in direct contact with the embodied lived world” (McGilchrist, 2009, pp. 199-200), and provides the “capacity […] to empathise. Meaning is more than words” (McGilchrist, 2009, p. 72).

**Insights into the First Incongruity**

‘Visceral Connectivity’.

As such, experiential processes like self-awareness, empathy, compassion, identification with others, and intersubjective processes between individuals, are not activated during ‘virtual interactivity’ with an individual, the other’s bodily energy, and the necessary trigger that activates the right hemisphere, unavailable. Body energy engages right-hemisphere connectivity, or ‘visceral connectivity’, wherein the processing of emotions is concerned with deeper meaning and understanding of others.

‘Acquaintance Connectivity’.

Each hemisphere processes information differently, but the conditions under which each operates makes available a particular type of connectivity, the “ability to connect to or communicate” (Merriam-Webster online dictionary, 2012) no longer automatically means that a connection between humans beings will result, connection referring to a “relation of personal intimacy” (Merriam-Webster online dictionary, 2012), which McGilchrist (2009) posited only results from a physical, face-to-face human energy exchange. Online connectivity may bring us closer together in space, but because it occurs through a digital medium, it also fosters a connectivity of a different nature, which I define as ‘acquaintance connectivity’, since there is no intimate, or visceral, connection. How then to describe the type of ‘acquaintance connectivity’ afforded by the left hemisphere, it appearing logical that it is the left hemisphere’s way of processing emotions that is fostered online?
‘Visceral Connectivity’ vs. ‘Acquaintance Connectivity’.

As McGilchrist argued, the left hemisphere way of being in the world is “to step outside the flow of experience […] in a form that is less truthful, but apparently clearer, and therefore cast in a form which is more useful for manipulation of the world and one another” (McGilchrist, 2009, p. xx). As such, the left hemisphere involves a kind of attention paid to the world that “brings to bear focussed attention, which has the related consequence that the left hemisphere sees things abstracted from context and broken into parts, from which it then reconstructs a ‘whole’” (McGilchrist, 2009, pp. 27-28).

This kind of attention isolates, fixes and makes each thing explicit by bringing it under the spotlight of attention. In doing so, it renders things inert, mechanical, lifeless. But is also enables us for the first time to know, and consequently to learn and to make things. This gives us power, a way of fixing it (experience) as it flies, stepping back from the immediacy of experience, stepping outside the flow. (McGilchrist, 2009, p. 31)

This contrast, by which the right hemisphere is “in direct contact with the embodied lived world: the left hemisphere world, is by comparison, a virtual, bloodless affair” (McGilchrist, 2009, pp. 199-200), which brings us to how the left hemisphere’s processes emotions in interactivity. As McGilchrist argued, it does play a role in the understanding of expression of emotions, but how it does it is quite differently, “more involved in conscious representation of emotion: willed, or forced, emotional expressions, […] explicit representational content of the observed emotion […] [and] more superficial social emotions” (McGilchrist, 2009, pp. 62-64).

With bodily energy ‘disabled’ online, the right hemisphere’s sensitivity to the dynamic and complex interplay of human energy and affect way of processing affect lies dormant. The result is that humanness online is engaged at half throttle, human connectivity reduced to acquaintance connectivity. A computer, which operates on algorithms, is unable to generate, communicate, or interpret the energy of affect embedded in bodies. Moreover, as users enjoy exercising control over others online, little wonder that adjunct behaviours, which are for the most part anonymous in nature, like bullying, trolling, swarming, anonymity, and hacking are manipulative. Moreover, since the assailant does not receive the victim’s energy, the emotional reaction of feeling, seeing, assessing, and interpreting another, characteristic of the right hemisphere’s way of processing emotions and language, is absent.
As such, neither empathy, which, as Damasio (2000) noted, is achieved through an inherently slow neural process that computer use does not foster, nor compassion, exist. In turn, the selfish, confrontational, inconsiderate, and narrow-minded behaviours exhibited online are the “one exception to the right hemisphere superiority for the expression of emotion is anger. Anger is robustly connected with left frontal activation. Aggression is motivating and dopamine plays a crucial role in the rewards it offers” (McGilchrist, 2009, p. 61).

One must also keep in mind that the left hemisphere’s amygdala is associated with “explicit representational content of the observed emotion” (McGilchrist, 2009, p. 62), and thereby incapable of capturing the deeper unconscious emotions that the right hemisphere’s amygdala is able to process. As the right hemisphere is crippled, the necessary emotions to assist youth in creating an online culture of collaboration, empathy, and compassion are not available.

The left hemisphere dominates, and “those emotions to do with competition, rivalry and individual self-belief, positive or negative, would be preferentially treated by the left hemisphere” (McGilchrist, 2009, p. 63) are prominent online. The left hemisphere memory is more concerned about “memory for facts that are in the public domain” (McGilchrist, 2009, p. 54), and not the episodic memory of the right hemisphere that is concerned with “memory of a personal or emotionally charged nature” (McGilchrist, 2009, p. 54).

McGilchrist further posited that patients with right temporoparietal deficit, those who cannot decode or understand messages in the eyes, develop paranoia “because part of their right hemisphere brain that would have interpreted it was no longer functioning” (McGilchrist, 2009, p. 59). Therefore, only words are left, but youth cannot interpret words’ multiple interpretations, nothing framing their impression of what the words mean. Incapable of accessing the right hemisphere and its ability to alter or transform emotion, paranoia sets in, the result being depression “from damage to the right hemisphere [that] has more of indifference or apathy— a global, vague lifelessness” (McGilchrist, 2009, pp. 62-63).

Paranoia, however, was my students’ initial behaviour. Subsequent groups, spending more time online, and only living “acquaintance connectivity”, made it progressively evident that they could not tap into the right hemisphere’s potential “to emotional understanding and regulation […] where the emotional significance of events is consciously appreciated” (McGilchrist, 2009, p. 58). They were tapping, however, into the left hemisphere’s emotions, “those emotions to do
with competition, rivalry and individual self-belief” (McGilchrist, 2009, p. 63). Residing in affect’s first level, left-hemisphere emotions is exemplified by youth’s extreme lashing out, typical of ‘le grand refus’, as technology inhibits the hemispheric transfer so that emotions can be processed by the right hemisphere “where a new synthesis can be made” (McGilchrist, 2009, p. 195) to foster deeper meaning and understanding.

The Second Incongruity: Behavioural Transfer

In time, I observed youth transfer their online affect, or left-hemisphere acquaintance connectivity, into the classroom. Face-to-face interactivity was the victim; empathetic or compassionate exchanges relegated to the trash, and aggression, impatience, and rudeness the ‘mots d’ordre’, and I presumed that this behaviour transfer simply meant that their egos were strong, signifying a more individualist society on the rise.

They did not want, however, to reflect on the impact of their online behaviours. Increasingly superficial face-to-face relationships prevented authentic connectivity, as trust issues, lighting paranoia’s fire, distanced them from engaging in the interpretation of any affect. Incapable of truly looking at one another, they focussed on scanning their physical environment to monitor possible opponents or enemies, their amygdala quashing empathy. As McGilchrist wrote, damage to the right hemisphere fosters “a change in, and a foreignness of, the self which is disconnected from the world, [and] a loss of feeling of belonging in the world” (McGilchrist, 2009, p. 236).

Insights into the Second Incongruity.

There had to be another explanation as to why youth were transferring their online affect into the classroom. Accepting that unmitigated computer use damages the natural navigation between both hemispheres, which results in the left hemisphere dominating the right, the mind is then unable to send information to the right hemisphere, no matter its biological programming. The corollary is that authentic connectivity requires balanced, hemispheric navigation, but the brain’s plasticity favours what we foster.

Clearly, “there are needs, drives or tendencies, which, […] are also fundamentally incompatible: an essentially divisive drive to acquisition, power and manipulation, based on competition, […]”
and an essentially cohesive drive towards co-operation, synergy and mutual benefit, based on collaboration” (McGilchrist, 2009, p. 129). What happens if the corpus callosum, the main band of neural tissue that connects the brain’s hemispheres, and allows them to communicate, is asynchronous? It does set “one thinking about the virtues of division, and the degree to which each hemisphere can deal with reality on its own” (McGilchrist, 2009, p. 18). Computers and the corpus callosum are similar in that they both have the capacity to inhibit communication between the hemispheres. Is digital media mimicking the role of the corpus callosum, and slowly taking over its function?

While digital media is a fixed mechanism that inhibits the right hemisphere’s access to the processing of more social, human emotions, the right hemisphere is unresponsive to machines, as it does not propagate human energy. The corpus callosum, however, is biologically flexible, able to control, and conserve the hemispheres’ degree of separation by allowing either the transfer or the inhibition of information “according to the stance we adopt towards things, the type of attention we pay to them, the disposition we hold in relation to them” (McGilchrist, 2009, p. 4). As such, humans can choose how to process information since “the world is not independent of our observations of it, attention to it, and interaction with it” (McGilchrist, 2009, p. 5).

Therefore, youth prefer acquaintance connectivity to my self-defined theory of authentic connectivity. (To be fair, they are not aware of the difference.) Technology’s impact on the corpus callosum does explain why youth’s energy in the classroom is scattered, and so terribly disconnected. Habituated to technology stimulating and focussing their brain’s energy, youth depend on it to also regulate their physical energy, which explains how slack-jawed they are when their devices are silent, and only coming alive when the chirp, the ringtone, or the vibration, confirms they are part of the universe’s updated change in status.

**Herein lies the Danger.**

However, once we “have surrendered our senses and nervous systems to the private manipulation of those who would try to benefit from taking a lease on our eyes and ears and nerves, we don't really have any rights left” (McLuhan, 2001, p. xx). With youth eliminating the experiencing of embodied self, we must teach them to counteract manipulation, citing Rushkoff who wrote: “Do we direct technology or do we let ourselves be directed by it and those who have mastered it? Program or be programmed” (Rushkoff, 1999, p. xx).
As machines inhibit the right hemisphere’s way of processing affect, arguably replacing the corpus callosum, information transfer processing is weakened. Educators must teach youth to autonomously, and efficaciously navigate online and face-to-face activities with both hemispheres to counteract manipulation, dominance, and oppression by moving away from the “either–or” mindset. The import of coexistence will otherwise be lost, and the human tension required to challenge how people view and understand the world will diminish human evolutionary growth.

Since the right hemisphere is more distinctive of the human condition than the left, it remains a puzzle why it has been neglected. […] Yet we know it is the hemisphere on which experience is grounded and which has the broader view, the one that is open to whatever exists outside the brain. How then has this neglect occurred? (McGilchrist, 2009, pp. 128-129)

**Tyler’s Second Question:** “Should the school develop young people to fit into the present society as it is or does the school have a revolutionary mission to develop young people who will seek to improve the society?”

Lloyd Yero contended that it is “clear in listening to the language of education that its current primary focus is on knowledge and teaching rather than on the learner. In short, students are expected to conform to schools rather than schools serving the needs of students” (Lloyd Yero, 2010). Educators are painfully aware of Wagner’s argument that the “Innovative Generation are skeptical of adult authority and the institutions that their elders have presided over” (Wagner, 2012, p. 19).

School is a game the Innovation Generation knows they have to play to get “credentialed”, but they do it with as little effort as possible. Most have no desire to climb the corporate ladder and wait twenty years to do something interesting or worthwhile. (Wagner, 2012, pp. 19)

Wagner (2012) does nonetheless offer hope, positing that while youth take offence at being managed, being differently motivated, they will engage if body and mind are involved since they “want to have meaning in what they are doing” (p. 21), and “want to know what they are contributing—what is the larger significance of their work” (pp. 22-23). The Internet offers that
sense of greater significance, but it is a lonely pursuit, and as Csikszentmihalyi argued, when “people try to achieve happiness on their own, without the support of a faith, they usually seek to maximize pleasures that are either biologically programmed in their genes or are out as attractive by the society in which they live” (Csikszentmihalyi, 1990, p. 7).

The quality of life cannot be improved this way. Only direct control of experience, the ability to derive moment-by-moment enjoyment from everything we do, can overcome the obstacles to fulfillment. (Csikszentmihalyi, 1990, p. 8)

The Internet, however, is a hungry monster, as it feeds ego. When Google announced that the biggest change in search engines was “personalized search for everyone” (Pariser, 2012, p. 1), it only augmented interest in the self with the new algorithms designed to purge everything that displeases us. As Teitel opined, the “future of the Internet’s most insidious damage lay not in people pursuing their own interests, but in our interests pursuing us” (Teitel, 2013), a phenomenon Pariser (2012) defined as “‘the filter bubble’ […] otherwise known as the web’s way of narrowing our world view without our consent – regurgitating ideas we like, and leaving out the ones we don’t” (Teitel, 2013). As Pariser pointed out, musing about having the world at one’s fingertips, the “only problem […] is that it’s awfully hard to see the world when you’re looking in the mirror” (Pariser, in Teitel, 2013).

Moving beyond Algorithms: The Dopamine Connection.

Algorithms profoundly control affect, since they appeal to “emotional primes, the primary-process emotional systems associated with specific brain networks and specifically designated in the brain-stimulation studies of emotions. They are Seeking, Rage, Fear, Lust, Care, Panic/Grief and Play” (Panksepp, in Weintraub, 2012, p. 3).

For humans, this desire to search is not just about fulfilling our physical needs. Panksepp says that humans can get just as excited about abstract rewards as tangible ones. He says that when we get thrilled about the world of ideas, about making intellectual connections, about divining meaning, it is the seeking circuits that are firing.

The juice that fuels the seeking system is the neurotransmitter dopamine. The dopamine circuits “promote states of eagerness and directed purpose,” Panksepp writes. It's a state
humans love to be in. So good does it feel that we seek out activities, or substances, that keep this system aroused—cocaine and amphetamines, drugs of stimulation, are particularly effective at stirring it. (Yoffe, 2009)

In response to Tyler’s (1969) question, then, schools do not have a choice, and have a revolutionary mission to develop young people who seek to improve society, since they clearly do not fit into the prevalent definition. Allowing algorithms to define relationships is not improving society. Allowing tangible online pleasures to run amok is counterintuitive to societal progress, and the authentic connectivity that moves through multiple mindsets. Learning how to transform behaviour through a better understanding of how energy flows through the body to give rise to modulated responses that appropriately respond to differing perspectives and mutable context should be at the forefront of curriculum design that steers away from either–or. None of this is possible until we address the fundamental issue: dealing with an arguably more sophisticated view of our subjective self by learning to conjugate with two worldviews, or paradigms: bodily intelligence, whose energy reveals the internal state of mind that colours our thoughts and actions, and ‘classic’ intelligence, whose Cartesian approach propels the potential of ideas beyond its first limits.

**What are Worldviews, or Paradigms?**

Scientific theories, principles, rules, and laws formulated into worldviews are actually “creations of the human mind; properties of our conceptual map of reality rather than of reality itself [and] are necessarily limited and approximate explanations of nature” (Capra, 1996, p. 317). As human beings’ inquisitive minds propels them into a relentless pursuit for knowledge and a deeper understanding of life’s puzzling mysteries, scientific theories are elaborated, then eventually overthrown as problems with the theories are discovered but, more importantly, as new answers are revealed, “recognition that nature has somehow violated the paradigm-induced expectations [leading] to re-examination of the accepted paradigm” (Kuhn, 1970, p. 52). As a result, the interpretation given to new findings translates into a new way of seeing the world. This paradigm shift has altered beliefs and preconceptions, unalterably restructuring how people do what they do.
Shaping Behaviour: The Cartesian Paradigm (Newtonian Model).

The present Newtonian model, which has dominated Western scientific worldviews and culture, is being challenged by new theories fuelled by the technological revolution, a paradigm shift in the making. The “well-established framework […] no longer adequate in explaining anomalies in nature [is creating] a crisis […] and] crises are a necessary precondition for the emergence of novel theories” (Kuhn, 1970, p. 77). As such, the Newtonian worldview, which fosters a materialistic and fragmented view of the world, sustaining a mechanical understanding of our world, has resulted in creating educational institutions that do not foster an integrated knowledge system, thus providing a divide between objective and subjective realities.

This belief has been conducive in dismissing, or casting aside, imagination and creative energy, thereby denying youth the full range of human experience and agency, and giving rise to a dominant management model in the classroom. Based on rational definitions of what is an organisational culture, it does not take into account other organisational realities like the inter-relationship between individuals, which is not mechanical, but dynamic and ever-changing, and the unpredictable character of complex situations, or the unique character of change itself, which calls upon constant renewal of perception of our changing realities. According to Bouchard and Fortin (1997), rational management does not adequately reflect a person’s true intent. It is rather emotions and feelings that animate and transform, and the Cartesian mindset does not attend to the study of the different interactivities that occur between people, and systems, which is important as the dynamics of this relational organisation does modify the behaviours of the initial organisation that was set in motion.

Initially instilled to respond to the Industrial Era’s needs, this mindset still dominates, no matter society’s move into the Informational Era, ultimately influencing how behaviours are shaped in school. Schools, therefore, are still utilizing strategies, and tools that extrinsically shape youth’s behaviour to please, rather than those that teach the intrinsic motivation required to learn. As Kofman and Senge (2001) wrote, society has “grown accustomed to changing only in reaction to outside forces, yet the wellspring of creativity is aspiration, imagination and experimentation […] and] become conditioned to reacting to other’s directions, to depending on others’ approval” (Kofman, & Senge, 2001, p. 9).
**Shaping Behaviour: The Perspective Paradigm.**

Our dependence on others’ approval to attain, and prove, success has inhibited the growth of mature affect, and kept us from evolving relationally, since obsessive, competitive behaviours, rooted as they are in the reptilian brain’s survival mode, prune collaborative ideals, and feed the argumentation that amplifies relational duality. We are in need of a complementary mindset that supports access to the cortex whose higher-level affective processes can distinguish the affective, perspectual nuance between, for example, disagreement and threat.

Unfortunately, perspective is often considered a sign of intellectual weakness, but as evolutionary biology and developmental evolutionary biology, dubbed evo-devo, suggest, human beings do have the capacity to be affected, and be transformed.

Evo-devo argues that major genetic changes in evolutionary history are driven less by natural selection than by mutations. In this view, mutations occur as species transform their environments and are in turn transformed by them. Evolution proceeds not only through internal adaptive innovations in organisms, but by evolving the possibility spaces of evolution to operate in—an interlocking, constant feedback process of mutual transformation. Ultimately, perhaps the evo-devo model will move us toward a model of being transformed rather than transforming something else, of cooperative rather than competitive complexity. (Harris, 2010, p. 12)

Briefly, “the unit of survival is the organism in its environment” (Harris, 2010, p. 12).

If the human species is going to shift the course of the evolution of complexity, we need to define ourselves as evolutionary creatures less in terms of our ability to affect and transform environments and others and more as creatures distinguished by their capacity to be affected and transformed. (Harris, 2010, p. 12)

**Paradigm Equilibrium: Reshaping Curriculum.**

According to Sarroul (2011), the deterministic theory of classical science sought to describe what happened in nature, point by point, studying each external object as independent of the other, and dividing the world in two: the objective, quantifiable, objective, and rational world, and the subjective, qualitative, and intuitive world. The objective world prioritized, the subjective realm
was pushed aside. A ‘newer’ science, quantum science, has stirred the pot.

The implications of quantum theory that we can have only statistical knowledge of certain phenomena and—according to the Copenhagen interpretation—the observer cannot be separated from the observed phenomena changed the dominant Cartesian worldview. Science seized to be the ultimate objectivity to explore nature, or as Heisenberg formulated: “Natural science does not simply describe and explain nature; it is part of the interplay between nature and ourselves; it describes nature as exposed to our method of questioning. (Lenart, & Pasztor, 2004, p. 9)

Quantum science appears to be a better guide for pedagogues in search of a new way of thinking to achieve a better understanding of youth’s changing behaviour, since it explains the complexity of our changing reality, and ultimately, the complexity of behaviour. What particularly sparked my interest is how quantum science views ‘matter’. Whereas classical science viewed matter as stable and solid, quantum science, according to Sarroul (2011) views it as packets of energy in perpetual transformation, wherein particles are dynamic systems that undergo perpetual transformations, or transmutations, and this flow is dynamic, creative energy. Curriculum design must address the dynamic flux of energy that shapes human behaviour, as it embraces both objective and subjective human expression, and lead to the affective equilibrium that enables youth who will seek to improve society.

**Tyler’s Third Question: “Should there be a different education for different classes of society?”**

This is a problematic question, but its very thorniness is the point. What is a class? Is it an economic construct, or an intellectual one? In addition, what does a different education imply? Propagating the fragmented, Cartesian mindset that perpetuates exclusion is not the answer, since youth live in a more holistic, interconnected world, which features possibilities rather than certainties. Perspective thinking, which welcomes differences, enables all, no matter their ‘class’, or their abilities, and halts the obstructive, oppositional behaviours that hail the individual to the detriment of the collective.

This is an ideal, of course. People do have different intellectual abilities, and are arguably economically, and geographically, advantaged or disadvantaged, at least in conventional terms,
but learning about complexity teaches them to not only “think of what they can contribute to society, but also to attend to how their work may be changed by participating in it” (Harris, 2012, p. 14). Of course, content is important, but curriculum design that speaks of academic rigour without addressing the means to achieve consistent excellence misses the mark. There are always students who leap over the bar, but what of those who will not learn? An educational caste system is offensive.

**Deconstructing Tyler**

Though Tyler’s (1969) model certainly placed an “emphasis on a mechanistic, prescribed, instrumentalistic, behaviouristic, and predictable curriculum […] [that was] mainly performance-based and behaviourist focused” (Koo Hok-chun, 2000, p. 60), it was nonetheless consistent with his era’s behaviourist tradition, and his rationale, which formed the foundation of school curriculum development by focusing on predetermination of objectives, stemmed from a Cartesian worldview. Koo Hok-chun (2000) further argued that while its prescriptive approach assuaged people’s fears, its “‘managerialist’ roots […] [were] an attempt to “manage” a curriculum for mass schooling”’ (Koo Hok-chun, 2000, p. 60). As such, Tyler (1969) provided educators with a “scientific model of learning […] [whose] procedures of designing and developing the curriculum […] [were] systematic and rational” (Koo Hok-chun, 2002, p. 59).

Today, however, our worldview has shifted: our world is neither predictable, and fixed, nor able to offer absolutes, as change is the only constant. The digital revolution, threatening to swallow us whole, has morphed the context in which we live. For education to make sense for youth, their educational experience must mirror their context. The Tyler (1969) rationale, though, still profoundly influences curriculum practice, its present effects extending “through to the formation and fulfilment of individual selves and identities” (Koo Hok-chun, 2002, p. 58).

Present-day curriculum designers, though, need a new framework, as the concept and features of modernism, which underpin the Tyler (1969) rationale, no longer meet today’s challenges. As Koo Hok-chun (2002) posited, modernity is a “social condition both driven and sustained by Enlightenment beliefs in rational scientific progress. Politically, modernity typically concentrates control at the centre with regard to decision-making, social welfare and education, and, ultimately, economic intervention and regulation” (Koo Hok-chun, 2002, p. 57).
There has been a cost of impersonality and alienation for [...] students, and bureaucratic inflexibility and unresponsiveness to change [...] Furthermore, narrowness of vision, inflexible decision-making, unwieldy structures, linear planning, unresponsiveness to changing client needs, the sacrifice of human emotion for clinical efficiency and the loss of meaningful senses of community have all become increasingly apparent and worrying features of the later stages of modernity. (Koo Hok-chun, 2002, p. 58)

In light of this, and driven to develop a wider perspective, I researched the history of curriculum studies, which brought me to the Reconceptualist and Post-Reconceptualist movements for which the trajectories, natural extensions of the other, are concerned with reconceptualising the curriculum field, or curriculum theorizing.

**The Reconceptualist Movement**

The theoretical turn towards reconceptualization in curriculum studies began in the 1970s (Pinar, 1979). Its curriculum projects were expressions of the United States’, and I argue, by extension, Canada’s, “intense determination to get a grip on things after Watergate, Vietnam, and the student protests that followed those disappointments” (Grumet, 1989, p. 13), but they “placed a stranglehold on schooling. Accountability, manifested in behavioural objectives and the back-to-basics curriculum movement, was the ideology of collective responsibility and it was very suspicious of individual enterprise” (Grumet, 1989, p. 13).

Pinar (1979), arguably the father of the Reconceptualist movement, and his colleagues recognized the tension in the curriculum field.

[Reconceptualization was initiated, and was meant to] include different voices associated [...] with the wider movement of a humanistic nature and its hermeneutical roots [...] [The] reconceptualists were crucial for studying curriculum from a viewpoint other than one of technical rationality, as well as for analyzing its social and personal contexts. (Pacheco, 2012, p. 5)

This was a conscious effort to shift away from the dehumanized modernistic bureaucratization of schooling toward the intellectual exploration of a non-domain specific field. As Pinar argued, “reconceptualization is a reaction to what the field has been and what it is seen to be at the
present time” (Pinar, 1979, p. 93). Its aim was to “understand, not just implement or evaluate, the curriculum” (Pinar, 1999, p. xiv).

Reconceptualist curriculum theory seeks to drive a wedge between theory and practice by suspending the instrumentalist intention. [...] The suspension serves to interrupt the very familiar responses that we as actors have to the situations in which we, ourselves, were raised. [...] Curriculum theory seeks to restore the contemplative moment in which we interrupt our taken-for-granted understandings of our work and ask again the basic questions practical activity silences. In creating and maintaining contradictions between theory and practice, we can reconceptualise the relation between these two domains. (Pinar & Grumet, 1982, pp. 53-54)

Pinar (1978) also argued that a reconceptualist sees research as both an academic (intellectual) and a political phenomenon, and that “what is necessary is a fundamental reconceptualization of what curriculum is, how it functions, and how it might function in emancipatory ways” (Pinar, 1978, p. 211). As such, reconceptualists are writers/researchers interested in a mode of thinking that conceptualizes education anew, and privileges alternative modes of inquiry. Pinar (2012) suggests that our goal as curriculum theorists should be to “bring the structures of experience into our awareness, which, in turn, enhances our ability to reposition ourselves as subjects who are capable of changing what we have experienced instead of remaining unaware of our experiences and therefore remaining objectified by them” (Pinar, 2012, pp. 57-58).

This approach, which has moved into post-reconceptualist curriculum practice, however, has given rise to a project, which, according to Pinar (2012), is “not fragments of a whole, but separate. [...] [The] present state of the field seems sufficiently variegated to conclude that what we curriculum studies scholars have in common is not the present but the past” (Pinar, 2012, p. 528).

Despite its centrality in efforts to understand the present, curriculum history remains underdeveloped in a field traumatized by malevolent politicians and undermined by opportunistic colleagues. (Pinar, 2012, p. 528)
The Post-Reconceptualist Movement


For students who are new to the curriculum field that might seem like an unruly text, a chaotic collection that offers few guideposts by which to find one’s way. This is the reality of contemporary curriculum studies, an interdisciplinary field less continuous and coherent than discontinuous and fractured. Fifteen years ago it might have been appropriate to identify discourses by way of gender, race, political, poststructural, aesthetics, auto biography, theology and so on, in the field. Since then much has changed. Cultural studies, critical race theory, and critical geography have entered the field. Discourses that might in the past have been distinguishable have made their way into hybrid spaces that make their unique characteristics indeterminable. […] Others have shifted theoretical lenses to shed new light on familiar topics. […] The point is, that the scholarship of the contemporary field represents an increasingly complex and eclectic range of backgrounds and interests with scholars producing knowledge that combines ethical commitments with various theories to take up unique positions in the field. (Malewski, 2010, p. xiv)

Insight into the Post-Modern World: Malewski.

Pinar (1978, 1979, 1982, 1999, 2010, 2012) and Malewski (2010) did inform me on the evolution of curriculum studies. It was Malewski (2010), however, who provided me with insight I consider particularly valuable in achieving deeper understanding about youth’s present predicament regarding the pruning of authentic connectivity. I contend that this is the underlying scenario that needs to be attended to, by positing that the “rapid change and increasingly complex nature of curriculum studies also requires giving up on knowledge we can grab hold of in any complete sense to embrace proliferations, tensions and discontinuities” (Malewski, 2010, p. xiv). Briefly, Malewski (2010) illustrated how the post-reconceptualist generation is a reflexion of the state of the post-modern world, which has submerged us into complexity, change, transformation, and possibilities that are inevitably giving rise to expressions that come to life in a multilayered, pluralistic interpretation of the world.

The rise of perspective is not new. What is, however, and herein lies the difficulty in this post-
modern era: these multiple expressions of perspectives are deliberated by individuals who demand that their lived reality, essentially, their lived experience, not only be acknowledged, but attended to. The phenomenon of welcoming “the myriad of theoretical clusters that make up the field, each operating with different assumptions, outlooks and histories” (Malewski, 2010, p. xii) is a healthy approach, but destabilizing to generations who have experienced curriculum development based on a relationship with the past, giving rise to a cause and effect framework that encourages teachers to delineate right and wrong answers.

The development of a new mindset that embraces the new worldview shaping the 21st century paradigm is critical, otherwise the discussions will revert to dissention, opposition, and ultimately, further “breakdowns” (Malewski, 2010, p. xi) akin to those that occurred at the “2006 Purdue conference, Articulating (Present) Next Moments in Curriculum Studies: The Post-Reconceptualization Generation(s)” (Malewski, 2010, p. xi). What was, according to Malewski, the most unsettling was the “incommensurability of viewpoints that became increasingly evident the longer discussions ensued. […] [Along] with other breakdowns like it, [it] became a source of debate over the extent to which the field is open to historically subjugated perspectives, ideas, and people” (Malewski, 2010, p. xii). As such, whereas the focus of the post-reconceptualists is geared to changing curriculum discourse by exploring inter- and intra-generational dialogues in the hope of finding fresh perspectives, I believe that a more pressing issue needs to be addressed if the movement is to achieve its goals in speaking to our new generation.

More specifically, while Malewski (2010) approaches the issue by inviting new students to become “more familiar with the field and all of its dimensions, they might do well to trace their own course of study through crafting personal, conceptual montages at the crossroads of the scholarship they study and their personal experiences with it” (Malewski, 2010, p. xiv). Before we move toward Malewski’s (2010) suggestion, however, we need to learn to authentically connect with each other in order to dialogue in a more expansive, constructive manner, which appears to be at the core of youth’s lived, root problem.

Proposing Neo-Reconceptualism: Moving beyond Reconceptualism and Post-Reconceptualism

The urgency to embrace perspective to better understand the world, and assist us in resolving the ‘personhood crisis’ we are experiencing, invites us to continuously adapt, and self-organise in
order to ‘transform’ with change and complexity. As such, we need to come to terms with how
the Cartesian mindset has conditioned us to resolve conflict, which applies argumentation, a
logical process that disregards the role of affect, and consequently, problem solving, or decision-
making, perspectives. New ways to resolve conflict by attending to our unexplored, silenced,
biological potential need to be welcomed.

We must acknowledge the subjective realm to fashion the mindset that will teach us to realign
our way of being and relating with each other. With affective, constructive, bodily energy
disabled online, and inhibited or contrived when confronted by face-to-face adversarial, negative
energy, the results are discernible: we descend to the lowest, human, relational denominator,
which synchronously affects intellectual outcome. The mind is obviously not detached from the
body, and we can no longer believe that the body is simply a physical structure that we inhabit. I
argue that the body, embedded with its own intelligence (beyond its sensorimotor abilities),
supports, or inhibits, human intellectual and affective processes in accordance to internal and
external environmental forces.

**Bodily Intelligence: Unexplored, Functional Decision-Making Capacity.**

Cognitive science may affirm that only brain activity explains thought (intellectual activities) and
affect (relational activities). Drilling down into cognitive science and neuroscience research
about the mechanisms of the mind, however, taught me that though higher cognitive activities do
occur in the mind, they can become inaccessible if bodily intelligence decides to inhibit energy
flow toward the cortex’s destination, where higher brain centres are involved in perception, and
higher-level emotional processing. The mind/brain can therefore orchestrate many functions, but
is not the sole intelligent controller. Bodily intelligence, which primarily regulates the energy
flow that reveals the internal state of mind, can subjugate it. Thus, the brain is less ‘organ’, and
more a part of a collaborative, dynamical, complex system. It is a reminder that multiple types of
energetic communication channels co-exist in our bodies that, though capable of making
functional decisions independent of the brain, remain unexplored.

I reconsidered my lived experience with the creative process, which taught me the importance of
bodily energy attunement through the fostering of positive energy to better assist a group’s
bodily alignment with each member. Opening energy channels to more readily access
imagination heightened the ability to achieve higher connectedness linkage, which led to ideation
flow. My lived experience reaffirmed how today’s overemphasis on a technocratic, digitized,
cognitive culture must make way for its counterpart, the subjective realm of our humanness, that
will allow us to experience wholeness of thought and form.

Taking Back the Power: The ‘Total’ Person’s Dynamic Flux of Energy.

The power afforded to ‘pure’ cognitive and neuroscientific research, as relates to learning and
education, which has focused predominantly on the brain, is only one part of the greater
understanding of the whole of learning. We can no longer afford ‘mind ascendancy’ over the
‘total person’: mind, body, and soul, but we do need to become better attuned with our bodily
intelligence. Learning to transform behaviour through a better understanding of how energy
flows through the body will give rise to modulated responses that appropriately respond to
differing perspectives, and mutable context.

Neo-reconceptualist curriculum design addresses the dynamic flux of energy that shapes human
behaviour, as it embraces both objective and subjective human expressions, and leads to the
affective equilibrium and constructive energy that are able to achieve better bodily synchronicity
on all fronts: mental, emotional, and physiological. Synchronicity provides youth with the means
and tools to self-organise, and better adapt to changing context.

Unfortunately, bodily energy channels to the cortex are blocked, the body responding to the
natural and technological environments’ prominent negative and adversarial conditions that are
more conducive to an amygdalic survival mode. We need to address total energy flow, and learn
how to transform traditional patterns by embracing both cognitive and human sciences: cognitive
science to understand the functional mechanism as it appears, and human science to align this
knowledge with one’s lived experience in order to transform it into the higher synthesis, the
realm of unification.

To embrace both, and attend to the lack of synchronicity, I propose that we acknowledge that
what cognitive science and neuroscience teach about the brain’s complex, orchestrated, inner
workings does supplement our understanding of our thinking processes, but their absoluteness
must not be the sole authority. We need rather welcome ‘pure’ science as that which helps us to
create the images that we associate with our internal activities, and to remind us to remain aware
of our internal state’s participation in our lived experience. Seeking to discover how this
knowledge can enrich our lived experience to achieve a more autonomous way leads to a greater homeostasis in our state of being. Utilizing images tests the scientific, social constructs of our lived experience, as our bodily response reveals their value.

**A Loving Responsibility: Attending to Youth’s Challenges**

Youth are experiencing a right-brain affective disconnect, society dealing with affect from a logical, left-brain perspective. The educational system believes it is allowing for authentic connectivity, but rationally approaching affect by analysing its emotion, imagery, and intuition is further distancing youth from the right hemisphere’s emotion processing modus, essential in establishing enduring bonds with others. Moreover, computer use, reinforcing the left hemisphere’s emotion processing modus, is leaving youth ill-equipped to care for others, and easy prey for a consumerist, materialistic society that places little, ‘real’ value in a humanitarian viewpoint.

Indeed, youth have neither the tools to foster the connectivity required to navigate their affect between the brain’s hemispheres, nor those required to develop right hemisphere cognitive capabilities. Regrettably, youth’s weakened affect, increasingly leading them to anger, aggression, and manipulative behaviours, is reducing the depth of their relationships to the lowest, common denominator.

In addition, while society, and by extent, the educational system, still hold to the traditional Cartesian worldview, youth are experiencing a biological conflict. “What begins in the right hemisphere’s world is ‘sent’ to the left hemisphere’s world for processing, but must be ‘returned’ to the world of the right hemisphere where a new synthesis can be made” (McGilchrist, 2009, p. 195).

Thus what is offered by the left hemisphere should be and needs to be ‘aufgehoben’ (‘preserved as well as transformed’) by the right hemisphere, not cancelling the left hemisphere’s contribution but taking it further, by drawing it back into the realm of unification […] transformed by a ‘higher level of the process’. (McGilchrist, 2009, p. 204)

In essence, conventional, educational theory is at cross-purposes with students’ hemispheric
challenges, opposite polarities in play. Authentic connectivity is impossible without a pedagogical ‘bridge’.

**Reshape, Rethink, and Revise**

Reshaping pedagogy, rethinking curriculum, and revising education policy to reflect the complexities of interactivity between humans, and humans and technology, is critical. As acute is a needed, foundational shift in the curriculum taught student teachers, so to equip them with the observational tools required to navigate their, and their students’, affective energy with both hemispheres in play.

This is a shift from a previous perspective, wherein I believed that authentic connectivity was the mode of interactivity between, or among people, that embraced only brain ‘knowing’: the cognitive knowing of engagement, and the subjective knowing of affect and intuition. I now hold that authentic connectivity is the integrative bridge that allows us to journey in both hemispheres’ higher thinking and knowing states in the cortex through cooperative efforts between both brain and bodily intelligence.

**Definition of Authentic Connectivity: An Evolution**

*How Defining Authentic Connectivity helped me Understand Youth’s Predicament.*

My research question, “What is the lived experience of authentic connectivity for youth?” brought me to reflect on the very definition of authentic connectivity, which has resulted in my pursuit to understand how our consciousness has been moulded by culture and science, both contexts responsible for shaping how we view our world, and define our behaviour.

I advance that cultural, scientific, biological presuppositions are structures of the imagination in an attempt to explain human nature and nature. As such, new structures can be reimagined when those previous can no longer tell the story of an individual’s lived experience. There is therefore a need to recognize that we are unconsciously absorbed by cultural, scientific, biological assumptions, perceptions, attitudes, and habits of seeing and thinking, if we are to understand the human journey’s bigger picture to uncover how we can be better attuned to our environment.
**First Definition.**

My first definition contended that it is the mode of interactivity between/among individuals that embraces both cognitive (objective) engagement and affective/intuitive (subjective) ways of knowing to create meaningful relationships through a deeper awareness of self with others. It reflected my cultural supposition, which emphasised the role of the arts and creativity, as a means to assure continued cultural expression, and counter assimilation. This arts-based definition led the way to understanding that authentic connectivity embraces both the subjective – the lived experience of a minority’s heartfelt expression, and the objective – the abstract, social construct of the majority’s expression of power.

![Figure 1. Authentic Connectivity: A Process of Linking the Self to Society.](image)

**Second Definition.**

My second definition asserted that it is the mode of human interactivity that embraces energy transfer between the left hemisphere’s cognitive thinking, which flows from social constructs, and the right hemisphere’s cognitive knowing, which flows from the immediacy of individuals’ experiential paradigms. Additionally, it embraces the energy transfer between the left hemisphere’s subjective thinking, which flows from algorithmical affect, and the right hemisphere’s subjective knowing, which flows from a desire to create meaningful relationships through deeper understanding of self through self, and self through others.

This definition reflected my new understanding of the scientific supposition, which emphasised an interpretation of the brain as separated from the lived experience, thus perceiving thinking and emoting as an activity solely occurring in the brain. Our complex, human body was reduced into a biochemical stew of processes taking place in the brain with the body cast aside, thereby neglecting the involvement of the lived experience in the dynamics of human interactivity.
In spite of this exclusion, one cannot dispute that the knowledge revealed by cognitive science and neuroscience does have an important impact in our lives, as the lived, human world does intimately intersect with whatever the brain and body are doing. This is a valuable discovery, as it helps us understand the body’s internal, physiological workings, which results in the ability to identify malfunctions or anomalies that can help us develop preventative measures.

Figure 2. Authentic Connectivity: Embracing Human Interactivity and Energy Transfer.

**Third Definition.**

By bridging the cultural, lived experience, and the scientific, abstract, social construct, my third definition has moved beyond cultural and scientific imperatives, as my increased awareness of deeper human potential has cultivated a consciousness of evolution. I am more mindful of human interconnectivity, and its potential in the development of higher stages of consciousness to build beyond our learned mindsets, and instil the desire to flow into a dynamic, transformative state of being. Embracing this flow links the role of the body as an intelligent entity that fosters authentic connectivity, and holds the whole of learning.

As such, authentic connectivity is the deep-rooted desire to engage in an intuitive/cognitive process of opening one’s bodily energy channels, thereby allowing the energy flow to access the cortex, and as such, foster the mode of human interactivity that embraces energy transfer between the left hemisphere’s cognitive thinking, which flows from social constructs, and the right hemisphere’s cognitive knowing, which flows from the immediacy of individuals’
experiential paradigms. Additionally, it embraces the energy transfer between the left hemisphere’s subjective thinking, which flows from algorithmical affect, and the right hemisphere’s subjective knowing, which flows from a desire to create meaningful relationships through deeper understanding of self through self, and self through others.

**Achieving Authentic Connectivity.**

Authentic connectivity is achieved through a concerted, continuous dialogue between bodily intelligence, and the brain’s intelligence. Both cooperatively partake in a system-wide, energy synchronization through our ability to align and attune our energy into a positive, alliance energetic flow, which, in turn, opens bodily channels to more readily access the cortex’s higher connectivity channels of human potential, which implies opening the gates to authentic connectivity, creativity, learning, engagement, and evolutionary transformation.

The necessary connectivity that engages humans to want to experience, create, engage, and learn, authentic connectivity is the ‘bridge’ that accepts, fuels, nourishes, and channels human energy, our very humanity. Welcoming the body in the whole system of thinking and being fosters inclusion, and will hopefully assist youth in moving away from incessant critical, negative thinking, which seeks to undermine, by teaching them how to construct meaning, achieve wider understanding, and reinstate authentic connectivity.

![Figure 3. Authentic Connectivity: Whole System Thinking and Being.](image)
**Signs of Incongruity.**

The lived experience of authentic connectivity for youth is best described in three assertions, which are visible signs of incongruity.

Firstly, youth’s technological addiction has reduced their world to a technological ‘haven’. They prefer living in the virtual world than living face-to-face, and in the process, are divorcing the body from everyday living.

Secondly, with the amygdala fully deployed, youth are entrenched in technology’s adversarial energy, and moving away from the right hemisphere’s subjective knowing. With little desire to affectively engage with others, they, and by extension, student teachers, are progressively members of a virtual humanity with decreasing personal and social skills, and lack the fluidity to capitalize on both hemispheres’ strengths.

Thirdly, youth enjoy relaying information, and are dependent on rapid accessibility to find answers. They are so connected to machines that they are ready to outsource their minds to networked, electronic devices unless we open new venues of understanding and being.

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Figure 4. Authentic Connectivity: Imaging Incongruity.
Summary.

My proposal to renew authentic connectivity pushes biological potential, and engages youth once again. Adhering to the theory that humans do want to belong, being human is about engagement and understanding. Providing the necessary tools to assure this interactivity, which is the thread of life, is critical, since connectivity is what binds our energy to the cosmos.

In our traditional tribal mindset, those with talent received special attention within the clan, which made them engage, as they felt connected, but the world ‘felt’ closer. Attention was long-term. Today, the tribe is a virtual diaspora, and though talent is still recognized, attention is short-term. Inciting engagement requires increased effort with seemingly diminishing returns, which builds disengagement, and a general lack of connectedness. We must move beyond talent, and learn to design relationships that enable us to ‘stack the moments’ with the affective mortar required to be human in a technological world.

The challenge lies in the word itself, emotion. Emotions, as Healy and Consedine (2011) argued, motivate our most important decisions, and are at the heart of cultural processes and socialization, but how does one get a handle on their ‘inner life’? Scientists have focussed on biology, essentially blaming the amygdala for extreme behaviours. Is it not time to consider bypassing the amygdala’s automatic responses to better encompass biology and affect?

Cognitive Science’s Contribution

The Brain and Emotion Regulation

Human research with technology like fMRI has focussed on discovering how specific mental processes like memory, perception, and language, function. Learning how specific brain processes work at the neural organization level, and how these processes interact in the brain in most of us, are mostly the sum of our knowledge. To learn how to modulate affective energy, a basic understanding of what parts of the brain regulate emotion is required.

Panksepp and Bernatzky (2002) found that research suggested that numerous brain systems were responsible for emotional responses, while specific systems handled different basic emotions. The NIMH reported scientists had discovered that the part of the brain most commonly associated with emotion is the amygdala, with its response and regulation “crucial to one's social
behavior through the monitoring of daily life events since it can detect and respond to danger signals” (NIMH Staff, 2005), and whose survival strategies are fight, flight and appeasement.

However, the amygdala, like many regions of the brain, does its work outside our conscious awareness, meaning we can become aware of the consequences of its activation by our behaviour, but we do not have conscious access to its inner workings. Most importantly, though the amygdala operates on the unconscious level, it has profound effects on our perception, behaviour, and consequently, our experience. As Armour and Ardell wrote, the “main role of the amygdala is to coordinate behavioral, immunological and neuroendocrine responses to environmental threats” (Armour, & Ardell, 2004, p. 220). The amygdala can additionally process information two ways.

Firstly, it can receive information from the thalamus, and send it directly to the cortex, or the thinking brain, to be analysed and processed, to better choose an appropriate response. Secondly, in the face of danger, it can make instantaneous decisions about the threat level of incoming sensory information, totally bypass the thalamus, and send the information directly to the hypothalamus, which, in turn, immediately reacts with a fight or flight response. However, as detailed by Carter (2000), emotional control can also break down two ways.

One is if the signals sent from the cortex to the limbic system are too weak or undirected to override the activity arising from the amygdala. The other is if the amygdala is activated in the absence of any outside stimulus that would simultaneously arouse the cortex. (Carter, 2000, p. 145)

The amygdala, one of the limbic system’s modules, a relatively primitive brain circuit, takes an alternate route because it is “densely connected to the hypothalamus and the conscious cortex and […] constantly feeds information upward” Carter, 2000, p. 42). It also “serves as the storehouse for emotional memory within the brain. Thus in assessing the environment, the amygdala compares incoming emotional signals with stored emotional memories” (Armour, & Ardell, 2004, p. 230). Another of its functions is to organize what patterns become familiar to the brain, and recognize them to detect any threat to its survival. As a result, many of our behaviours tend not to be under the control of higher thought processes mediated by the cortex, but under the control of emotions, mediated by the amygdala.
Our conscious control over emotion, however, is weak, and the thinking cortex often fights a mainly losing battle to banish emotions to change behaviour. Carter (2000) maintained that emotional traffic between the limbic system and the cortex ran both ways, and though the way we think and behave can affect the reactions of the unconscious brain, more connections run up from the limbic system to the cortex than in the other direction. Clearly, Carter (2000) wrote, emotion is the driving seat. For his part, Damasio (2000) specified that emotionally competent stimuli, or basic emotions like happiness and anger, were detected quickly, ahead of selective attention.

More recent research collated by the NIMH (2005) revealed that regulation of the amygdala comes from three areas of the prefrontal cortex located in the front of the brain: the dorsolateral, the medial, and the orbitofrontal cortex. If the amygdala chooses the direct route to the hypothalamus, and bypasses the cortex, these regulators will most likely not have an impact on our final behaviour, giving rise to a fight or flight response, involving the expression of basic emotions. These responses, wrote LeDoux, are “fast, simple, innate (hardwired) responses […] executed in a stereotyped manner” (LeDoux, 1996, p. 159). So what exactly do the three areas of the prefrontal cortex mediate?

According to the NIMH report, “the dorsolateral area is thought to establish and maintain social goals governing an interaction; the medial area has been associated with empathy and regulation of negative emotion; and the orbitofrontal region is involved in assigning emotional values to a situation” (NIMH, 2005). Essentially, when the amygdala takes control, we do not have access to our full range of intelligence, and behave by the rules of a relatively primitive brain circuit, which evolved to aid us when survival was threatened. What is the point then to the amygdala, whose primary role, the processing and memory of emotional reactions, inhibits access to our full range of intelligence when assessing the threat level of incoming sensory information?

Negative emotions such as fear, anger, rage, and anxiety can certainly be beneficial, helping us avoid danger, or reckless behaviour. Stress, however, is so prominent today that negative emotions overwhelm our bodies, leading to many modern ailments like phobias, depression, panic attacks, and heart disease. The survival instinct kicks in, attempting to eliminate psychological threats with the same fight or flight response a physical threat induces, but this does not appropriately address the issue.
Once activated, the amygdala does strengthen memories of the initiating experience via neural pathways to the hippocampus, making us repeatedly psychologically and physically relive the original experience. No longer faced with the constant threat of predators against whom a fight or flight response is an appropriate reaction, it is time to intervene in the amygdala’s functional behaviour, as we consider that purely visceral primitive reactions are destructive, as they call upon neurotransmitters and hormones like adrenaline that are difficult to efface, negative emotions and emotional memories tending to be strongest.

“Once the emotion is initiated the emotion is very difficult to stop. This state is called a “refractory period”. […] A person is not receptive to new information while in the grip of emotion” (Ekman, 2007, p. 54). Furthermore, emotions affect the body, just as the body affects emotions. As Evans explained, any feedback loop allows “for amplification which […] explains our capacity for working ourselves up into a florid emotional state until exhaustion of the machinery” (Evans, 2001, p. 71). So, does the amygdala create a psychological imbalance in our response?

A Tale of Two Paradigms

The corpus callosum joins the brain’s hemispheres. Recognising its significance means individuals can reshape their mental maps’ assumptions to realign thoughts, feelings, and actions towards higher shared meaning with others.

Acknowledging the Brain’s Plasticity: The Import of the Tangible and Intangible Worlds.

Cartesians reject the concept that two paradigms can co-exist in one person, a belief that reinforces the premise of an either–or understanding of the world. The concept of brain plasticity proves that it is possible for two paradigms to co-exist, but that means accepting that each paradigm has its own mindset, those conditions required to give rise to diverse ways of thinking, or being. Acceptance provides for a new mindset that moves with complexity, which is dynamic, interconnected, and constantly in motion, neither fixed nor determined. The Cartesian mindset is certainly important, as it provides the conditions required to understand the inanimate world of industry and technology, but the logic of its fixed, numerical, algorithmic tools does not address the animate world, which requires fluid, dynamic tools to acknowledge different states of being.
The Import of the Tangible and Intangible Worlds.

Traditional scientists are highly praised, and prized, and rightly so, for answering scientific questions by manipulating the inanimate, concrete world via an experiment methodology of direct observation of tangible sources. Experiential scientists need to be as highly praised, and prized, for researching connectivity interactivities by delving into the animate, dynamic world via a holistic methodology of direct participation of tangible sources.

Thinking and Being: The Cooperative and Integrative Nature between the Objective World’s Cognition and the Subjective World’s Intuition.

Jung (Cholle, 2007) argued that humans have two pairs of dichotomies in human psychic functioning: one is about how we make a decision – thinking and feeling, and the other is about how we collect information to base our decision – sensation and intuition. According to Jung’s theory (Cholle, 2007), a decision is objectively made from an intellectual viewpoint, like an engineer facing a technological problem. From an emotional viewpoint in understanding a feeling like affect, a decision is based on a system of individual intrinsic values, like a mother who, sensing danger, does not hesitate to protect her child. Regarding the other pair of opposites from intuition’s viewpoint, we assess the development potential of a situation as whole. From a feeling viewpoint, we concretely assess what is in front of us.

Approaching Teacher-in-Training Pedagogy

Though the human species has evolved, the function of the brain system responsible for emotional responses appears to be in need of an upgrade, seemingly lagging in its evolution. The brain, though, is not confined to a fixed structure and can adapt to its changing environment due to its plasticity, which, according to Gruhn and Rauscher (2008), is the shaping of neural pathways through life experiences.

Assuming the brain is still evolving, and that models can help develop the cortex towards its full potential, we need not rid ourselves of the unconscious control that emotions have on our behaviour, since many automated behaviours, Damasio (2000) argued, ensure the homeostasis of our internal physiology by incorporating and transforming energy, and maintain a chemical
balance for the interior compatible with the life process. Mediated by the unconscious mind, our conscious mind is free to attend to more sophisticated thought processes like imagination, problem solving, and creativity.

As such, the intent of a new model needs to initiate necessary changes to the emotional system, presently bypassing mediation by the cortex, and provide a means of communication with the unconscious, so to consciously participate in the reprogramming of the amygdala’s assessment of emotions, especially those destructive in a social emotional context. This entails integrating a heightened state of conscious awareness, so to not overlook the subtleties of shared experiences in the realm of subjective knowing, gain a wider understanding of phenomena, and respond to the emergent properties unexpectedly arising from complex, dynamically-organized, human systems.

To achieve this greater mastery of consciousness, I argue that whereas cognitive science posits that emotions drive decision-making, I assert that the body drives it. It is one’s mastery of bodily energy flow that ensures that affective and cognitive energies reach the cortex, rather than wallow in the amygdala. Higher synthesis occurs in the cortex, giving rise to higher thinking and higher-level emotional responses. Learning how to increase bodily energetic awareness allows people to connect with their internal state of being: a consciousness of ‘something’.

In summary, it is a model, which aims to help us achieve better homeostasis of our psyche, by consciously teaching us to mediate the optimal state of an emotion to better understand the different energetic connectivities involved in interactivities. It involves committing to the urgency of integrating affective and cognitive energies as a means to align, and attune, the body’s constructive energy flow toward achieving higher connectedness linkage.

**Linking Human Science’s Contribution: Working with Imageries to Connect with our Lived Experience.**

Consider the image of a boa constrictor as a visual metaphor for the amygdala. As soon as we detect a feeling of adversarial, negative energy percolating in our body, the visual helps us immediately focus our attention on our internal state, the image, or its associated language, key in seizing the moment to connect with our consciousness state and step out of the process of the automatic emoting that usually occurs.
The image focuses our attention on our internal state to further develop our ability to disallow the boa constrictor’s attack, survival mode by controlling the evolution of the imagery. Better able to allow our lived experience to unfold by considering the new context, and its present constituents, affective memory recall may no longer apply, thereby giving our lived experience a more conscious role in the decision-making that stems from appropriate behaviour. Images are our most valued tool to dialogue with our consciousness, as the mind does not know the difference between internal, or external, activities; it simply responds to the visual it has received to protect us, or not, according to our perception, and affective memories. As such, creating imageries – metaphors and analogies – to represent the different internal processes are essential to our affective vocabulary.

With loss of control a major psychological stressor, technology’s immediacy occupying our every thought, developing tools that teach an individual to master consciousness is crucial in reducing the chaotic, manipulative flow, and harmonizing the balance between emotions and the mind. Homeostasis will therefore be achieved, and retrieve the positive energy needed to attend to goals and make life more satisfactory. As Damasio wrote, “An understanding of the neurobiology of emotion and feelings is a key to the formation of principles and policies capable of reducing human distress and enhancing human nourishing” (Damasio, 2000, p. 19).

**Linking Human Science’s Contribution: Creating a New Mindset to Connect with our Lived Experience.**

Research into relational practices evidenced that youth’s affective process is shifting into left-hemisphere subjective thinking, which flows from an algorithmic affect. This hemispheric imbalance, a right-brain affect disconnect, is moving youth away from authentic connectivity. As such, it is the subjective state of human behaviour, which I identify as authentic connectivity that is being challenged by technology and neuroscience. The biological conflict must be attended to. McGilchrist’s (2009) research on why human beings have two hemispheres spoke to me, as he argued that:

a. The difference in the information processing abilities of the hemispheres is what the brain does, but the manner in which it does it.
b. The difficulty is that the hemispheres stand in opposition to one another, and need to be kept apart.

c. These are not different ways of thinking about the world; they are different ways of being in the world. Each is crucially important, and delivers valuable aspects of the human condition, and though each needs the other for different purposes, they seem destined to pull apart.

d. The corpus callosum, the main band of neural tissue that connects the two hemispheres, is able to control, and conserve the hemispheres’ degree of separation by allowing either the transfer or the inhibition of information “according to the stance we adopt towards things, the type of attention we pay to them, the disposition we hold in relation to them” (McGilchrist, 2009, p. 5).

A transformative discovery came into play, as I realized that I was too focused on content. As such, my incapacity to connect with youth resided in my inability to navigate between the hemisphere’s different versions of the world, essentially, two different ways of being. Limiting myself to cognitive, logical understanding, I was overlooking intuitive, affective meaning, because I did not have the tools, skills, or awareness required to navigate between both hemispheres to investigate and experience both versions of the world.

I had identified the right brain issue, but was utilizing left brain tools to remedy the situation. I had to learn how to transfer between mindsets, an undeveloped ability in a Cartesian worldview. I was creating a hemispheric imbalance by prioritizing the left hemisphere’s cognitive thinking, which flows from social construct, and by neglecting the right hemisphere’s cognitive thinking, which flows from the immediacy of an individual’s experiential paradigm. Youth’s experiential paradigm in a changing society means they are unable to express anything in an intellectual abstract construct. It was my new knowledge about the role of the corpus callosum in transferring, or inhibiting, information that opened my mind to the new possibilities in reshaping our mental maps’ assumptions to create a new mindset that would connect more appropriately with our lived experience.

**Learning the Art of Transferring between Mindsets**
The Discovery of Fundamental Building Blocks for Teacher Education – Moving beyond Either-Or: Border Crosser, ‘Bridger’, and Hybrid Mindsets.

No wonder McGilchrist’s (2009) research resonated with me. He made me think about my internal pull, which resisted rigid dichotomy, and fought to move away from the either-or-paradigm. It fought to balance oppositional polarities, and move toward the big picture. Reading McGilchrist (2009) soothed my soul. I no longer needed to distance myself from my pull. I no longer needed to doubt myself. I could accept that I am, for lack of another world, coining myself a “bridger”.

As a “bridger”, I refused to consider that one hemisphere’s work is less important than the other. Not integrating both left me disjointed, and disconnected, which is why creativity appealed to me, as it taught me the way to move with the polarities by seeking linkage of higher connectedness. Bridge thinking helped me push through difficult, or transitional times, allowing me to see the bigger picture’s possibilities, and further entrenched my love of the creative process, as it embraced affect and cognition, thus whole body integration. As a border crosser, a self-defined hybrid, I am a belly-based cognitive who believes that intuition and cognition are equally important, as they give rise to a solid bodily foundation, upon which we can grow to surmount obstacles.

To learn how to autonomously transfer between mindsets, we must resist abiding solely to the rigid dichotomy of the Cartesian either-or paradigm, which provides the required conditions to understand the inanimate world of industry and technology, but not the conditions of the animate world. Briefly, the logic of fixed, numerical algorithmic tools cannot address the animate world, as it requires fluid, dynamical tools to acknowledge the different states of being. Tools that imply welcoming oppositional polarities as a means of seeking linkage of higher connectedness are required.

Learning about these dynamical tools begins with teaching student teachers to engage in what I name the ‘Cognitive/Intuitive/Synchronous/Dialogic Approach’, which introduces the observational/bridging pedagogy that guides students and teachers to move beyond the either-or paradigm toward increasingly progressive mindsets: from border crosser to ‘bridger’ to hybrid. Each teaches how to gradually master the art of fluidly navigating between, among, and beyond mindsets, and experience the strengths of both hemispheres’ ways of knowing. (Appendices A1,
A2, and A3 illustrate this concept.) With observational pedagogy, learning is transformative, and mind, body, and affect are not at odds, but authentically connected.

**Introducing the ‘Cognitive/Intuitive/Synchronous/Dialogic Approach’**

Through my work with students from all instructional levels, and adults in the educational and business fields, I hold that skills are – and need be – transferable to any discipline in order to enable all to collaboratively connect with others. What I propose offers a means to achieve goals in an environment that is conducive to personal, and societal, growth.

The cognitive/intuitive/synchronous/dialogic approach, as I choose to define my educational reflection, is the process of learning how to navigate one’s affective energy by tapping into one’s bodily intelligence to enable us to transform one emotion into another to keep bodily channels open, so to move fluidly through different mindsets. Efficiently navigating energy through one’s bodily channels, and between both hemispheres by applying an observational/bridging pedagogy will assist in finding new possibilities of understanding and meaning through linkage of higher connectedness, as one learns to discover and enjoy the strengths of both ways of being. This approach, therefore, introduces new tools and skills for teachers by means of a revitalized student teacher curriculum.

**The Body as a ‘Three-Prong Elemental Bascule Bridge’**

Merleau-Ponty (1964, 2005) wrote about double embodiment, from which I argue a new lineage of descent through the concept of the body as a ‘three-prong elemental bascule bridge’, in that the body has a triple embodiment, or a triple sense.

1. The body as the physical/concrete milieu of cognitive mechanism.

2. The body as a lived, experiential structure in relation to one’s
   a. Physical environment, which embodies all experience sensations.
   b. Mental organisation, which embodies all perceptions.

3. The body as an evolutionary experiential structure, defined as a plastic, transformable holistic being.
Adhering to the cognitive/intuitive/synchronous/dialogic approach will allow us to access the body’s three-prong elemental bascule bridge, a metaphor for the point of connectedness in the inbetweenness, means attending to relational dynamics’ many layers, while fostering collaboration between thinking and intuiting processes, and is the key to developing the conscious ability to move away from three issues.

**Automatic Emoting.**

The first issue, automatic emoting, involves the amygdala, and resides on the first bridge. The amygdala is the bridge between the primitive brain’s interface with the world, and the social, cultural cortex, which is grounded in terrestrial living organization’s physical connectedness. It is where one learns to modulate, and guide bodily energetic response away from automatic emoting’s reactive responses to ensure that affective energy is mediated by the cortex, where higher level emotional responses can occur.

**Automatic Thinking.**

The second issue, automatic thinking, involves the corpus callosum, and resides on the second bridge. The corpus callosum is the bridge between the cortex’s hemispheres, and is grounded in higher human energetic connectedness’ mental organisations. It is where one learns to synchronize one’s body with one’s mind and affect, and move away from automatic thinking toward the left hemisphere’s reflective thinking, and the right hemisphere’s perspective thinking. Moving onto this bridge and attaining the cortex allows higher synthesis to occur and gives rise to higher thinking and being. Mediation by the cortex means moving away from reactive action.

**Automatic Existence.**

The third issue, automatic existence, is the interstitial space of connectedness, and resides on the third bridge. The interstitial space of connectedness is the bridge between habitual thinking patterns amid what we know and have excluded, aware that every choice results in eliminating the unmanageable possibilities that still simmer, and new possibilities of understanding and meaning, or new knowledge. It is grounded in evolutionary organisation’s universal energetic connectedness. It is where one learns to explore, and align the possibilities of body plasticity
because synchronized body, mind, and affect synergy move away from automatic existence toward a transformative, evolutionary existence.

Summary

My approach acknowledges that youth and adults are presently having trouble in achieving authentic connectivity. Unaware of how external and internal forces can block our bodily channels, this escalating phenomenon is inhibiting the proper, energetic alignment needed to access the cortex’s higher cognitive and affective responses, an observable shortcoming of the Cartesian mindset, which has ignored the body and mind connection.

I consider that our body is a three-prong elemental bascule, or moveable, bridge that is presently swinging upward, thereby inhibiting bodily energy from traveling the pathway needed to reach the cortex where higher connectedness’ potential is made available. An excess of adversarial, negative, energy flow therefore impedes enough alliance, positive, energy flow to reinstate body-mind, energetic synchronicity.

Analogy between Blurred Vision and Incoherent Bodily Energy.

Consider this analogy: blurred vision occurs when a pair of glasses’ lenses is misaligned. A synchronous image is impossible. As a result, the mind experiences confusion, and disorientation, accompanied by a feeling of physical imbalance.

Push the analogy. Assume one lens is aligned for positive energy flow, and the other is aligned for oppositional, negative energy flow. Consider the accompanying imbalance, and transfer the concept of physical imbalance to blurred connectedness. Since connectivity between intuition and cognition energy flow is so tightly woven, we need to experience them as one. Incoherent energy flow results when the energetic cooperation between them is inhibited, or interrupted. Stress, fatigue, anxiety, and other symptoms surface in our physiology, our moods and behaviour are signs and symptoms of imbalance and disconnect.

To realign vision, we need to balance the lenses’ focus, which is what this approach sets out to accomplish. It is a means to achieve bodily and mind energy synchronicity by introducing skills and tools to student teachers, so they may develop an awareness of those forces that promote blurred connectedness, and ultimately move beyond imbalance to better serve their students.
On a Side Note.

The cognitive/intuitive/synchronous/dialogic approach proposes tools to overcome the aforementioned obstacles. It does not ‘tell’ an individual how to act or react, but rather offers transformative, intrinsic, behavioural tools to deal with content and context. I submit that the tools will organically enable teachers, and students, to adapt to perspectives, and find new meaning and understanding. Learning to better navigate affective energy obstructs manipulation.

Revitalizing Student Teacher Curriculum, Part 1: Approaching Relational Interactivities

Curriculum

When teachers interactively engage with students, different types of connectivities result, depending on the organisational flow of energy, and can morph into an alliance, or an adversarial/confrontational, flow. Depending on the context, both can call upon positive, or negative, emotions, and realign to nuance the energy’s directional flow. Navigating affective energy requires attending to relational dynamics’ many layers, while fostering collaboration between thinking and intuiting throughout the process to ensure continuous, harmonious energetic alignment between body and mind to keep our body channels open so that one’s energy can access the cortex where higher thinking and higher emotional responses are made available. Implementation of the following constructs certainly involves designing courses, and indeed rethinking teacher-in-training curriculum, to address the issues. (Appendix B provides an overview of the cognitive/affective/synchronous/dialogic constructs and tools, and their relationship with the body’s triple embodiment.)

First Construct: How to Achieve a Fluid State of Mind for the Self

Student teachers, and indeed, all teachers, need to welcome student reaction, neither seeking to solve nor explain, much less take it personally. The focus, teaching youth tools to transform reaction, will enable them to modulate affect, and not succumb to reactive impulses. Navigational skills, and big picture visualization, are at the core.

Navigational skills facilitate control of emotional vulnerability, thereby enabling the fluid state of mind that modulates affective energy, which yields authentic connectivity. This connectivity aims to achieve the productive, deeper interactivity requisite in moving between mindsets to
attain a higher understanding of others and self, and the necessary conditions vital to bypass the amygdala’s automatic response.

This is achieved by teaching the mind to imagine a ‘mind compass’, whose affective True North, grounded in self-awareness, consciously recognizes duelling emotional surges, and defuses the reactive response. The mind compass, distances a person from the amygdala’s fight or flight instinct, which favours the dual aggressive behaviours that diminish learning, and understanding.

**A Brief Aside: On Imagination.**

Imagination is a ‘dirty’ word, having been co-opted by all and sundry to now mean anything and nothing, much like ‘creativity’ in its most vulgar sense. The true ability, however, to develop strong, mental, and representational images like metaphors and analogies, is vital, but must be taught to heighten and strengthen the ability to modulate affect. It is the foundational skill in guiding affect, since thinking in systems and detecting connectedness will enable students to harness complexity with greater ease.

Furthermore, the skills involved in exploring the imaginative self by developing visual capacities will lead students to venture into imagining new connections, contribute to finding novel solutions to problems, participate in creating inventions, or simply express themselves in novel ways. They will learn to have an open mind in a world of complexities.

**Second Construct: Observational Pedagogy’s Holistic Approach, ‘Bridge Teaching’ (Self With Others)**

Observational pedagogy trusts something is wrong, but verifies by removing reaction via the exercise of learned navigational skills. The ability to think in the big picture allows a teacher to move fluidly in the act of observation by staying close, but not immersed in the reaction through the honing of observational skills, and the implementation of perspective thinking.

**Alliance Energy.**

Observational skills bolster the ability to observe outward behaviour, and the connectivity of energy flow to align affective energies during the interactivity. Alliance energy ensures that information reaches the cortex where higher synthesis can occur as well as navigation between
both hemispheres. Perspective thinking is the ability to think in systems to detect higher connectedness. This ability links the language of imagery, and non-verbal body language to compose with differences.

The act of observing moves beyond focusing on interpreting the outward behaviours of non-verbal and verbal language, however. It is the ability to observe by intuitions the dynamics of bodily energy’s organisational flow to achieve alliance energy, which is a collaborative, cooperative energy flow accompanied by positive, or neutral, emotions.

Accompanied by positive emotions, alliance energy is an energy that expresses a desire to connect energies, and bond with others. Perceived as deeply collaborative, it fosters giving, caring, compassion, empathy, trust, affection, warmth, and enjoys cycling a give and take, positive energy with others. Accompanied by neutral, or negative, emotions, alliance energy is perceived as cooperative, but *quid pro quo*.

**Adversarial, or Oppositional, Energy.**

Competitive and manipulative in nature, adversarial energy can be accompanied by positive, or negative, emotions. Accompanied by positive emotions, confrontational energy is perceived as aggressive, and challenging, but is propelled by curiosity, eagerness, impatience, or even, incomprehension. It is not destructive, but is difficult to manage.

Accompanied by negative emotions, confrontational energy is perceived as defiant, aggressive, and challenging. It is destructive, as it seeks to dominate, control, and even destroy to conquer. The ability to identify the type of affective energy flow being communicated provides the necessary insight to apply the type of connectivity needed to respond in order to transform the energy of the interactivity into a growth, alliance energy, rather than a destructive, adversarial energy.

**On Bodily Intelligence.**

An essential characteristic of a lived experience is its immediacy; that is, consciously experiencing a phenomenon directly, without any type of intermediary. This immediacy appeals directly to our affect, through which a body experiences a feeling swell, which we then identify as a certain emotion.
Firstly, choosing activities that demand an individual’s active participation as a whole – mind, body, and spirit – as opposed to an abstract, intellectual reconstruction of a phenomenon, ensures that the exploration of the feeling self is at the forefront. Students will then discover how learning to manage emotions relieves stress, negativitvity, and anxiety, and encourage positive group outcomes.

This will emphasize the importance of establishing the proper bodily/affective conditions to move through different mindsets, and achieve the desired outcomes in a healthy fashion. With these newfound abilities, students will further challenge themselves by exploring different types of connectivities to yield different interactivity outcomes, but this is only possible by learning to regulate bodily affective flow of energy, as it is the key to exploring complex human relationships, and experiencing a higher realm of well-being.

Secondly, in asking students to relive certain lived, negative experiences, we can alter their memory by changing the outcome by teaching the importance of infusing alliance energy to see the event under a new light, remembering that affective memory recall can often inhibit one from ‘living’ the phenomenon with its new constituents, as we bring into the equation the emotion of a similar past experience. As such, students need to learn that emotions must be re-evaluated in their present context to truly appreciate the present situation, rather than that of experience lived under a different context.

Teaching them to not be reactive in a given situation will enable them to send the information to the cortex where higher synthesis can occur with the new context as a first tool. Assisting them to transform their affective state towards greater maturity will prevent them from being paralyzed and bound by experiences that inhibit higher-level being growth. Learning the difference between affective memories that induce life-threatening situations and psychological threats must be distinguished, as they need to be handled differently.

**Maintaining a Fluid State of Mind to Engage the Body in a State of Flux.**

Identifying the type of affective energy flow, under which relational interchanges are submerged, necessitates that one’s mind remain in a continued fluid state, so as to not be drawn into a reactive response. Understanding that oppositional or adversarial energy connectivity seeks to ignite a reactive response, a wide-lens approach will block the reptilian brain by focusing
cognitive and affective energy toward a heightened positive emotional flow, necessary to access the cortex for higher synthesis of information, and navigate information to both hemispheres.

To do so, one needs to immediately engage cognition in perspective thinking by initiating a question-led investigation, and simultaneously engaging affect into big-picture imagery by creating new images that scan an individual’s background information to determine the reasoning behind the feeling and the reaction. This distances affect from confrontational energy, and suppresses reactive responses to sustain a positive emotional stance and emit an exchange’s alliance energy.

As such, the synergy of focusing energy by aligning affect and thoughts into a tightly woven symbiotic relationship engages the body into a state of flux, which fills it with an increasing flow of positive alliance energy, enabling deeper-level connectedness with others. This connectedness facilitates discovering the missing link of misunderstanding in an exchange. It is certainly errors in perception that lead to the misunderstandings that ignite dissention. A body in a state of flux keeps the mind fluid, and open to thinking about possibilities, necessary to reroute or retrain ego to think differently about what scenarios underscore connectedness; the cortex is in the driver’s seat, thereby helping the ego to think and act less unilaterally and selfishly, and more expansively about each interactivity.

The Bridge: Observational Pedagogy’s Interstitial Space.

Optimum affective conditions from an emotionally positive alliance energy flow allow information to reach the cortex where higher synthesis can occur. This is the bridge, the interstitial space where new possibilities navigate from one hemisphere to the other, and the aim of observational pedagogy: to fashion a new mindset that modulates affect to ensure higher-level emotional reactions. It is the first step in moving to the next level, wherein student-teacher, or student-student, interactivities move together to achieve higher connectedness. With observational pedagogy, learning is transformative, and mind, body and affect are not at odds, but authentically connected.

A Few Words on Perspective Thinking.

Engaging in perspective thinking – the ability to think in systems to deal with differences, means
refusing to engage in argumentative exchanges, the battle of who is right, and who is wrong. It is finding the disconnect through imagery and non-verbal language to seek higher connectedness linkage between the differences. Teaching perspective thinking raises students’ awareness on how thinking about affect develops a skillset that harnesses emotions, thereby opening them to alternative conflict resolution that does not always involve competitive thinking, but rather constructive thinking.

A ‘perspective thinker’ can defuse the confrontational energy that drives the fear of differences, or the process of change, and move new ideas with greater assurance, open to the positive influence different views elicit, again fuelling higher levels of connectivity. A teacher who models perspectives teaches students how to create the necessary bridge between individuals to discover the bonds of connectedness that exist. Consequently, the individual learns through the collective, and the collective learns through the individual, as all learn and experience interconnectedness. Open to a world of complexities, youth will view change as a window of opportunity, rather than as a crisis, ultimately awakening their intrinsic motivation, as perspective thinking moves in a fashion similar to the online trial and error thinking they enjoy, and are quite good at executing.

Applying their gaming talents to real life issues puts to good use their ability to scan huge amounts of information, and generate possibilities, thereby assisting youth in finding new meaning in their lives, as their input will impact real-life outcomes. Because what they can do matters, participation will also have a new meaning. Once their imagination is awakened, they will begin to see possibilities, which will fuel their desire to shape the future, as they will be equipped to explore the power of connectedness, and introduce them to the interdisciplinary meshing of minds.

Third Construct: Bridge Teaching

The first level of observational pedagogy involves learning to modulate affect into an alliance energy flow, fuelled by the positive emotions required to create the optimum affective conditions needed to send the gathered observations to the cortex’s pathway, where a higher synthesis of information occurs. This pathway brings us onto the bridge, the second level of observational pedagogy, where it is what we do with observation that matters.
Being on the Bridge.

The bridge is a metaphor for the middle ground between the hemispheres that opens us to an interstitial space of connectedness – that space between habitual thinking patterns amid what we know and have excluded, aware that every choice results in eliminating the unmanageable possibilities that still simmer. The balance lies within the interstitial space, where one learns to embrace the interplay between affective and cognitive ways of knowing to achieve the wider connectedness synthesized by the cortex where higher thinking and affective processes occur.

When we learn to bypass automatic thinking, utilizing the qualities of Herbert’s (Herbert, 2010, p. 4) assertion of the “heuristic mind”, which moves beyond legacy thinking, other realms of possibilities are revealed that move beyond reaction, and onto action. In addition, as we also bypass the automatic emoting – the reptilian survival emotions, other realms of being that are revealed move us beyond being reactive, and onto higher connectedness.

The middle ground is about a fluid movement of the mind, self-defined as fluid origami movement, where neither thinking nor being has been decided. It is rippling into a new organisation, swelling into the interstitial space of possibilities with new associations among ideas, images, and strong emotions, giving rise to a new order of thinking and being. This fluid state of mind enables our mind to reconfigure itself, and move toward the missing link of higher connectedness we seek. A transformative process at work, the bridge is perhaps the lifeline of our biological evolution.

This incubation process is the bridge that allows us to transfer new findings to either hemisphere for further process by learning to navigate between each hemisphere’s mindset, each requiring specific conditions to gain access to its way of being and thinking. Teaching these conditions to students will better equip them to choose the connectivity that is best suited to create the necessary interactivities that enable them to achieve the desired outcome.

Acknowledging the middle ground between the hemispheres moves the brain away from the unilateral, Cartesian paradigm that prioritizes the left hemisphere’s way of seeing the world, a fragmented view that endorses an either–or philosophy, toward the right hemisphere’s way of seeing the world, a holistic view that encourages a continuum approach, shepherded by the corpus callosum. The inability to bridge the hemispheres arguably explains why our natural
tendency to deal with perspectives is undeveloped, as the transformative concept of understanding and organising our world is unexplored.

**Introductory Toolkit**

**Bridge Thinking and Being: A New Mindset.**

Learning to foster and navigate the underlying conditions of each thinking mode is essential for students, but a steep learning curve is involved. One needs to become aware of one’s initial thought patterns and learning habits to achieve this goal. When this learning transition is integrated, however, students will be independent, responsible, critical, and creative individuals, better able to adapt, switch, and choose the thinking and the emotions that are more appropriate, given the context. With a framework upon which to build higher-order skills, they will become reflective and projective thinkers able to deal with complexities.

**Revitalizing Student Teacher Curriculum, Part 2: A Holistic Approach to Lesson Planning – Teaching Thinking and Being**

**Introduction.**

Healthy, appropriate classroom behaviours entail self-regulation of the adversarial energy that overpowers the alliance energy that is vital to embracing authentic connectivity. Lesson plans must therefore be grounded in an all-encompassing methodology, which bridges the hemispheres, and provides students with the human experience’s full range of holistic learning.

What follows is an introduction to the conceptualisation of a holistic lesson plan, based the applicability of the cognitive/intuitive synchronous dialogic approach, which is the conceptual groundwork to opening the gateway to leaning how to bridge the hemispheres. It is not exhaustive, but rather part of a ‘work in progress’ toolkit, which will elaborate the integrative process of teaching thinking and being.

Each lesson plan must include:

a. A tightly woven integration of both cognitive and affective content.

b. An action plan that integrates the active participation of body, mind, and spirit into the
learning experience.

c. An integrative evaluation that considers growth and learning on three scales:

a. Continuum (affective growth and maturity),

b. Intermittent (cognitive expansion),

c. Generative (cognitive and affective inventiveness).

This methodology intricately amalgamates the teaching of aptitudes (cognitive content: knowledge) and attitudes (affective content: connectivity/interactivity) by utilising imagery to find the linkage between cognitive and affective content within a context that serves as the common thread of connectedness. (Appendix C models this concept.) Teachers will certainly need refined conceptualisation skills that connect close and distant ideas to unearth a common denominator of connectedness between affective and cognitive content, and a communal context through which a lesson evolves.

Providing an external and imaginative context, or scenario, is a mandatory element to nurture affective growth, since students who ‘pin’ another’s quest to their vision board will experience varied perspectives, and open them to a lived, holistic, affective experience that involves mind, body, and spirit that will unify a lesson’s affective and cognitive content. Because the immediacy of a lived experience appeals directly to our affect, through which a body experiences a rise in feeling, which we then identify as a certain emotion, youth will embody new meaning, and as such, a change of behaviour may follow from an intrinsic motivation, deeper understanding achieved.

Imagination is a major player in this approach, as studies in brain plasticity reveal that our “thoughts can change the material structure of our brain […] [M]ental practice and imagination in fact lead to physical changes” (Doidge, 2007, p. 200). “One reason we change our brains simply by imagining is that, from a neuroscientific point of view, imagining an act and doing it are not as different as it sounds” (p. 204). “Brain scans show that in action and imagination many of the same parts of the brain are activated. That is why visualizing can improve performance” (p. 203). “What these imaginary experiments show is how truly integrated imagination and action are, despite the fact that we tend to think of imagination and action as completely different
and subject to different rules” (p. 207).

**Outcome for Teachers.**

By continuously practicing their ability to find linkage of higher connectedness between ideas, teachers will discover that they can create new ideas from any source. The methodology, a holistic approach to lesson planning, will dispel fear of change and the unknown, since they will have a tool that enables them to deal affectively and cognitively with perceived chaos, and set aside the numbing paralysis that accompanies fear. Moreover, this ability will help them deal with cultural differences in the classroom, as they, as well as their students, move with mutable context by utilizing adaptable, conceptualisation skills that transform content to make it more fluid and pertinent to students’ needs, and the dynamics of relationships.

**Outcome for Students.**

Since the activities that develop affect are usually participatory, interactive, and expressive in nature, youth, accustomed to the Internet and gaming’s interactive, participatory modus, will appreciate moving away from conventional classroom activities. Youth, holistically engaged in learning, will discover in their mutual, lived experiences that positive, alliance energy elicits higher realms of well-being, and feels better than negative, confrontational energy. They will then be ready to learn.


To implement the proposed paradigm shift, educators need to update their job description. They can provide an education, and facilitate learning, but the post-digital generation requires the deep-tissue guidance only ‘guiding challengers’ can provide. Who is this person? The one who guides students through the holistic process of being and thinking, and more importantly, challenges them to become interdependent thinkers, doers, and innovators who can modulate their affective energy.

Guiding challengers cannot adopt a model of dominance as a teaching style, dominance inviting complacency and passivity, there being no allowance to participate in co-creation of knowledge, just absorption of knowledge. As such, they simultaneously learn with, and from, students, while
moving away from being the truth maker to being an investigator of possibilities. Content is not central, but complementary, to the pedagogical approach needed to channel, and propel human energy through the teaching of skills that navigate mindsets to foster authentic connectivity.

**Revitalizing Student Teacher Curriculum, Part 4: Fundamental Building Blocks for Teacher Education – The Organic Process for Creating a New Mindset**

Our incapacity to connect with youth resides in our inability to navigate between the hemispheres’ different versions of the world, essentially, two different ways of being. Limiting ourselves to cognitive logical understanding, we overlook intuitive affective meaning, so we do not have the tools, skills, or awareness required to navigate between both hemispheres to investigate and experience both versions of the world.

We must learn to transfer between mindsets, an undeveloped ability in a Cartesian worldview. We are creating a hemispheric imbalance by prioritizing the left hemisphere’s cognitive thinking, which flows from social construct, and by neglecting the right hemisphere’s cognitive thinking, which flows from the immediacy of an individual’s experiential paradigm.

Youth’s experiential paradigm in a changing society means they are unable to express anything in an intellectual abstract construct. To learn how to autonomously transfer between mindsets, we must resist abiding solely to the rigid dichotomy of the Cartesian either-or paradigm, which provides the required conditions to understand the inanimate world of industry and technology, but not the conditions of the animate world. Briefly, the logic of fixed, numerical algorithmical tools cannot address the animate world, as it requires fluid, dynamical tools to acknowledge the different states of being. Tools that imply welcoming oppositional polarities as a means of seeking linkage of higher connectedness are required.

Learning about these dynamical tools begins with teaching student teachers to engage in observational/bridging pedagogy in order to fashion a new mindset that modulates affect to ensure higher-level emotional reactions. It is the first step in moving to the next level wherein student teachers or student/student interactivities move together to achieve higher connectedness. With observational pedagogy, learning is transformative, and mind, body, and affect are not at odds, but authentically connected.
End Notes

Students are profoundly unhappy. On the surface, and even beyond the first few layers, unhappiness is a natural behavioural manifestation in youth, as they navigate the waters toward adulthood. In the past, most readily, if unsteadily, grabbed the oars, and rowed. Goals were evident, community was present, and the promise of a good life awaited them. Technology’s perfect storm has muddied the waters. Goals are mutable, community is absent, and the easily read signposts leading to a good life have faded.

Rather than blame technology, arguably society’s greatest innovation so far, this paper suggests more appropriate ways in dealing with the phenomenon it has produced: a new brain that does not fit within the conventional mould. Its premise that a new pedagogical approach be applied to curriculum design for the sake of student teachers preparing to take on the classroom, and students caught in the throes of societal upheaval, is critical. Student teachers who maintain past practices with neither considering the new brain nor acknowledging the importance of both cognitive and human sciences’ way of knowing to achieve higher being will fail, and lose themselves in the process. Students who do not have the tools to take on the world as it is will squander their potential, and remain mired in aggression. For both youth groups, the survival instinct impedes personal and societal growth.

Curriculum content is good; curriculum context is better. Context observes, analyses, and moves within and outside curriculum. Context supports the new brain’s multiple viewpoints, empowers the person, and fosters interchange and interactivity. Observational pedagogy, which facilitates reflecting and acting upon context, speaks to personhood, the quality that enriches an individual, and ultimately, society, which finally stated, demarcates the authentic connectivity that is a pedagogue’s loving responsibility.
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Appendix A1.

Fundamental Building Blocks for Teacher Education: The Hybrid Mindset.

STUDENT AS HYBRID

Holds right/left brain navigation mindset.
Has flow: Can transfer knowledge.
Ability to focus beyond the self.

Intrinsic Motivation.

Left Hemisphere

Right Hemisphere

TEACHER AS HYBRID

Holds right/left brain navigation mindset.
Has transference ability: Builds student capacity.

Left Hemisphere

Practices Observational Pedagogy.

Right Hemisphere
Appendix A2.

Fundamental Building Blocks for Teacher Education: The ‘Bridger’ Mindset.

STUDENT AS ‘BRIDGER’
Has ability to be a hybrid. Welcomes both mindsets as a way of being: awareness. Does not hold to one dominant mindset.

Intrinsic/Extrinsic Motivation.

TEACHER AS ‘BRIDGER’
Welcomes right/left brain navigation mindset. Explores transference ability: Works on student capacity.

Attempts Observational Pedagogy.
Appendix A3.

Fundamental Building Blocks for Teacher Education: The Border Crosser Mindset.

**STUDENT AS BORDER CROSSER**

Has capacity to be a hybrid. 
Explores benefits of dual mindsets. 
Holds dominant mindset predisposition.

**TEACHER AS BORDER CROSSER**

Moves away from Cartesian either-or. 
Discovers benefits of dual mindsets.
Appendix B.

The Body’s Three-Prong Elemental Bascule Bridge: Triple Embodiment.

Mind Compass

True Affective North
Distancing from reptilian brain’s fight or flight instinct that favours dual aggressive behaviours.

Observational Pedagogy

First level:
Affect modulation into alliance energy flow creates optimum affective conditions needed to send observations to cortex’s pathway, where higher information synthesis occurs.

Second level:
Pathway onto bridge.

Bridge Thinking and Being

Body, mind and affect synergy aligns body plasticity toward transformative, evolutionary existence.

1st Construct

Modulating bodily energy modulation away from reactive responses to mediate cortex’s affective energy where higher-level emotional responses occur.

2nd construct

Synchronizing body with mind and affect toward left hemisphere’s reflective thinking and right hemisphere’s perspective thinking.

3rd construct

Synchronizing body, mind and affect synergy toward transformative, evolutionary existence.

Automatic Emoting

Between primitive brain and cortex.
Grounded in terrestrial living organization’s physical connectedness.

Automatic Thinking

Between cortex’s hemispheres.
Grounded in higher human energetic connectedness’ mental organizations.

Automatic Existence

Between habitual thinking patterns.
Grounded in evolutionary organization’s universal energetic connectedness.

Amygdala

Corpus Callosum

Interstitial Space of Connectedness

1st Bridge

2nd Bridge

3rd Bridge
# Appendix C.

## Lesson Plan Checklist Model.

**LESSON PLAN INITIATION AND TEACHING STRATEGIES CONCEPTUALISATION MODEL**
**TO STIMULATE HOLISTIC LEARNING AND ESTABLISH AUTHENTIC LINKAGE**

<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>ANCHOR POINT</th>
<th>CLASS MANAGEMENT</th>
<th>POSITIVE vs. RECALL</th>
<th>LESSON: XXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Affective</td>
<td>Physical</td>
<td>Behaviour (Energy regulation)</td>
<td>Values</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOOLS**

**INITIATION PROCESS**

| 1. |
|    |
|    |
| 2. |
|    |
| 3. |
|    |
| 4. |
|    |
| 5. |

**LESSON**

| 1. |
|    |
| 2. |
| 3. |
| 4. |
| 5. |

**ASSIGNMENT**

**HOMEWORK**

**REFLECTION**

1. 
2. 
3. 
4. 
5.

* Checked elements are for modeling purposes only.