

PAUL SYME

## 2. TIME TO LEARN WITH CREATIVITY IN MIND

### INTRODUCTION

The philosopher R. G. Collingwood defines creative expression as “an activity of which there can be no technique” (1967, p. 111). Collingwood speaks to creativity as an unconscious process where we work through experiences, memories, and media to reveal that which was previously unknown. Creative processes need space – not necessarily physical though always temporal – for the subconscious to operate and make connections outside of rational or analytical thought. Where I live and teach in Nova Scotia, time is optimized to serve accountability and student achievement. The development of creativity and innovative problem-solving is scheduled to occur in designated periods and certain subjects. It is reasonable, therefore, to question if such conditions sufficiently develop the child towards meeting the challenges of a society under the influence of digital environments.

#### *A Modern Education System*

Nova Scotia aims to meet the needs of 21st century learners while attempting to address flat-lining and falling scores in math and literacy through their *Action Plan for Education, 2015. The 3R's: Renew, Refocus, Rebuild* (Nova Scotia, 2015). The Ministry affirms that “we need to be accountable and we need to see real, tangible results” (p. 5) to be achieved by strategies built on four pillars. The first two of these pillars are particularly relevant to this paper. The first one is to “build a modern education system”, a regrettable pillar considering, as I will argue, that modernity is obsolete. In the second pillar the Ministry of Education aims to “make the curriculum more streamlined, coordinated, and innovative” (p. 18) where, while promising more hands-on learning activities and access to modern technology, they are “laser-focused” on improving literacy and math. Math, in particular, will see more common assessments, increased time and mentors in the early years, class size caps with time doubled, and it will be compulsory for every student through grade twelve (pp. 18–23). Such efforts will impact the space, time, and autonomy afforded to student self-determination. Creativity, on the other hand, is presented as belonging among “innovation, creativity, problem-solving skills” (p. 160). It is addressed only in response to those interested in entrepreneurship and the arts and not as a core

value or need of 21st century economy. The framework provides little evidence that creativity and innovation are understood or valued.

Like many political institutions of the modern era, the government of Nova Scotia seems to be unaware that the systems that have shaped the modern era, particularly the dependable and abstract order of the clock, are having to now share space with or be pushed aside by the non-linear, personalized, and divergent spaces provided through digital media. The digital age strips bare the necessities of time and space as defined in the modern age. Where the modern era had shaped a citizenry to value its logical order, similarly, the digital age is fashioning people to seek a new order – one that I will argue echoes creative thought. It remains to be seen if we are ready to embrace the trials and possibilities of the digital age through a society with sufficient capacity for “creative achievement [as] reflected in production of useful, new ideas or products that result from defining a problem and solving it in a novel way within a particular cultural context” (Zimmerman, 2009, p. 386). Regardless, change is before us and all stakeholders in education will feel its effects. Marshall McLuhan’s *Laws of Media* (1988) should help reveal the best route as it aids in illuminating and comparing the nature of time in modern and digital learning environments and the potential for creativity among them.

#### *Time Shapes us*

As products of the Modern Age we find comfort in order as well as excitement about some degree of chaos. Modernity reinforces order through its industrial foundations of machinery, the clock, and its capacity to convert phenomena to something observable and measurable. Modern education continues to socialize youth through the pedagogical primacy of numeracy and literacy, maintaining order through a kinship with the alphabet and the clock’s sequence while marginalizing the apparent disorder of creative thought processes. Now, in the Digital Age, our social and pedagogical priorities are challenged to reflect a new network-based society and an explosive list of social, political, economic and environmental concerns globally. Our “network society” (Castells, 2001) is intensifying our retribalization into a global village (McLuhan, 1962), where we nurture connections beyond conventional space and time, sharing information and experiences in a non-linear, non-sequential manner. In the network society, we step outside of our orderly boxes to find others, entertainment, meaning, and insight from divergent patterns that often echo processes of creative thought.

Though a product of modernity’s order, public schools are challenged to chart a meaningful course that reflects the current and future needs of students in a context of shifting dynamics. The urgency for us to resolve this challenge is heightened by greater forces than longstanding competition with private and charter schools. Schools now have to contend with the growing efficacy of digital learning environments such as Massive Open Online Courses (MOOCs). If Harvard Business School’s Clayton Christensen is correct, thanks to MOOCs “fifteen years from now more than half of

the universities [in America] will be in bankruptcy” (The Economist, 2014). Without charting a meaningful path for the 21st century, as the steamship sank wood, wind and sail, so too may be the destiny of modern schools. Finding a fruitful course for schools should include critical inquiry into our relationship with new media – how we shape them and how they shape us.

#### *From Machines to Clouds – A Turbulent Shift*

We do not need to look far to witness the volatility in our shift from a largely industrial society to one dominated by electronic and digital media. Marshall McLuhan (1969) noted that this shift “is a highly traumatic process, since the clash ... creates a crisis of identity, a vacuum of the self, which generates tremendous violence – violence that is simply an identity quest, private or corporate, social or commercial.” He traces the fuel for this conflict to the implications of change. Literacy itself is threatened by a “future, [where] we could imagine a cyberspace with less or no alphabet – an online communication system comprised in part or entirely of speech” (Levinson, 2004, p. 51).

School leaders struggle with the place of smart phones and other Wireless Mobile Devices (WMD’s) as useful tools for learning or weapons of mass distraction. As these devices have become extensions of most students and teachers we need to assume that they are here to stay and their presence will only swell. We would be well-served to determine when these devices aid learning and when they hinder it. Furthermore, if we believe that creativity is important in the lives of students, we need to know the pace of these devices in our current and changing pedagogy and media landscape.

#### *Seeking Insights through the Laws of Media*

The Laws of Media (McLuhan, E. & McLuhan, M., 1988) provide us with a useful instrument to assess the connection between our media and their effects on such things as time, space, schools, and creativity. They are designed to expose patterns and deliver insight into a medium’s potential impact on the world. The laws assert that with the arrival of an archetype, such as a new tool or concept, a human element is *extended*. Simultaneously something else is rendered *obsolete*, a previous idea or media is *retrieved* or *released* to serve a new function, and when pushed to the extreme, the media’s effect is reversed.

The Laws of Media teach us that *clock time*, for example:

- *enhances* efficiency and order allowing us to synchronize such things as events, machines and labor. It favours the reasoning capacity of our brain’s left hemisphere – work;
- *obsolesces* organic time as given to us by the sun, tides and the stars – allows us to disconnect from nature and leisure;
- *retrieves* the abstract nature, linearity and order of literacy and chronology; and

- *reverses creative human expressiveness* – as we use time to enhance efficiency we disconnect ourselves from nature and the frailty of our humanity. And, as we increase reliance on our brain’s left hemisphere, we diminish our brain’s creative capacity (pp. 166–167).

The Laws of Media might find that laptops and other wireless mobile devices *enhance* our ability to share information that engages multiple senses and provides greater illusions of connectedness and fantasy. They also *enhance a sense of belonging* through messaging, blogging, chats, avatars, etc. When pushed to their extreme, they *reverse* what is “real” to being irrelevant. We can spend our days divided among various physical, temporal, or virtual spaces. Direct experiential learning as well as direct human interaction are removed. We become detached from our physical selves and we can separate from our obligatory tribes in exchange for new ones. This does retrieve the notion of tribes but now we can choose new ones – tribes by choice through shared interest. This obsolesces our need for local communities, one-way mass-media communication and traditional purveyors of education where teachers and broadcasters are obsolete as content mediators.

A probe into the Nova Scotia Action Plan for Education, 2015 (see [Figure 1](#)) observes effects of the province’s aim to enhance efficiencies and literacies at the expense of other ways of knowing. This retrieves the idea of the industrial bureaucracy, discouraging holistic learning while also resisting change that, in turn,

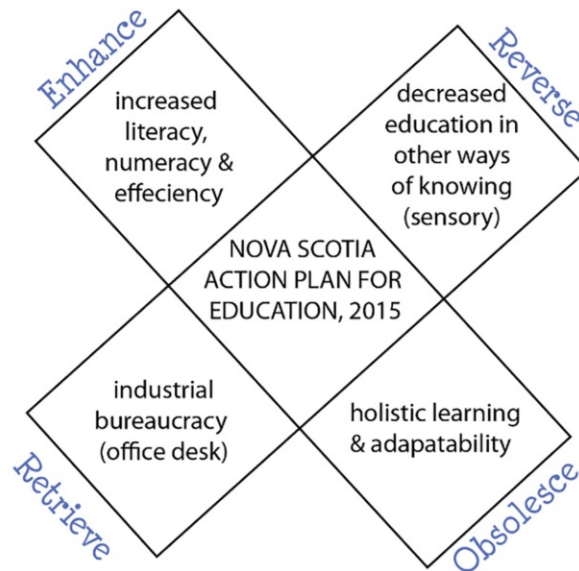


Figure 1. Nova Scotia Action Plan for Education, 2015 a learning focus  
Laws of Media tetrad

counters adaptability. With the times changing so rapidly, it would be wise to weigh our hopeful gains against the expense of apparent trade-offs. Time itself is worthy of investigation for its implications for our shift from industrial modernity to the immergence of digital media.

*Time*

Time may be known in many ways – by the sky, the seasons, our appetite, plant growth, and so on. Marie Webb, a young artist who is touched with Downe’s Syndrome does not mark time with a clock, but rather by moving from one celebration to the next. As her mother explains, “Marie’s internal clock is not numerical; the days and months are punctuated with the associated events and celebrations. As one birthday ends, another one begins” (Sheppard, 2013, p. 49). Her notion of time is central to her artwork. Where most of us might allow our lives to be ordered by work Webb’s life is consumed with family, friends, faith and celebrations – all of which she documents and expresses through drawing.

Webb’s time, along with other organic or rhythmic concepts of time, highlights what is central to this paper: that how we behave prioritizes our lives since the onset of the modern industrialized age is not inherent to our chromosomes and genetics. [Figure 2](#) models where we have invented a concept of time and space to echo the machine, replacing nature and God. And importantly, the digital age is causing time to shift again.

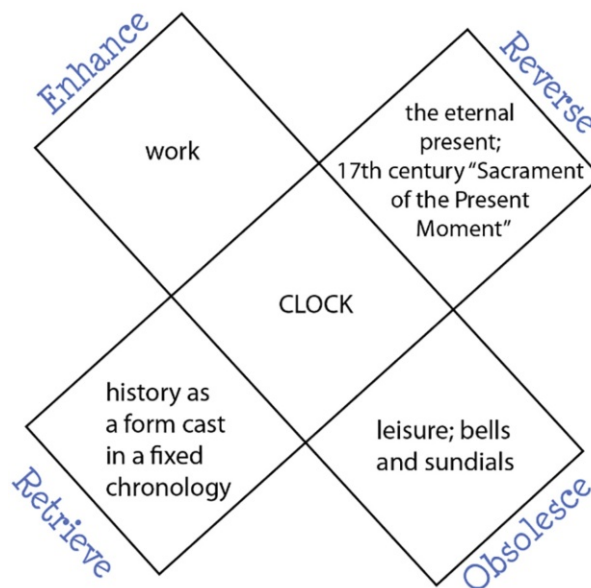


Figure 2. Clock from McLuhan (1988, p. 166)

Time as a medium is inseparable from recent dominant technological and communication paradigm shifts. Our sensory dominance has also moved in step.

Tribal people were oral communicators, and though all senses were equal, time came from the sun and stars. The invention of the alphabet and literacy catapulted sight to the top of our senses and time followed literacy's abstract form. Gutenberg's printing press of the Renaissance brought us to the machine age and the mechanical clock. This clock soon became portable spreading a concept that all could be made "visual, abstract and uniform", and making way for the printing press and the press led us to the industrial revolution and modernity (Adam, 2003, p. 62; McLuhan, 1964, p. 138). Through its abundance, we then became numb to time's effects and thus allowed it to shape most aspects of our daily lives. And, where we invented the clock to order our lives, borrowing from Lewis Mumford, Neil Postman (1986, p. 11) observed that after the 14th Century the clock made us "time-keepers, and then time-savers, and now time-servers".

Clock time shaped modernity to accelerate and expand the primacy of rational, sequential and abstract thought.

Abstract, machinic, invariable, and linear time – a disciplining time that would rationally arrange the social world, and rhythm it to synchronize with a universal and cosmological order – was at the very heart of what was to become modernity. And its introduction was revolutionary (Hassan, 2011, p. 13).

Electricity extended acoustical space with the telephone. Radio and television shows gave us entertainment to set our watches by. Now in the digital age, time is moving towards irrelevance and our media are connecting us with each other while numbingly integrating with all of our senses.

### *Sensory Spaces*

Our WMD's are unique extensions of us in that they interface with our tactile, acoustical and visual sensibilities. We interface with these devices through touch in a way that each touch is relatively invisible – our entire tactile field is diminished to the smooth nothingness of glass (providing the irony for Apple Computer's concept of the *iPod "Touch"*). As we connect and disconnect from a surface we disrupt order and encourage play. As such, touch is not connectedness, it is not constant: it is linking through intervals.

Though mainly visual tools, WMD's seem to allow us to simultaneously enter multiple virtual spaces, qualities McLuhan & McLuhan identify as particular to acoustical space. Acoustical spaces, like the tactile, obsolesces the connected and, unlike visual spaces, the space is not linear or static (see [Figures 3 & 4](#)). Sight allows us to fixate on a focal point and sound delivers an entire space. As such, visual space is fixed while acoustical space is ubiquitous.

WMD's trick us – in them we lose sight of the fact that an image is not on a surface, it really occurs in our mind. Like our mind's kluge-like structure, in WMD's, time

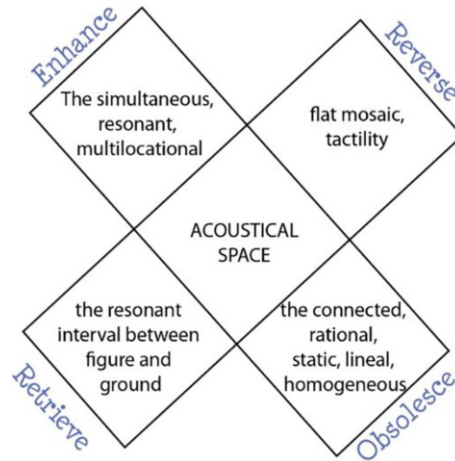


Figure 3. Acoustical space from McLuhan & McLuhan (1988, p. 160)

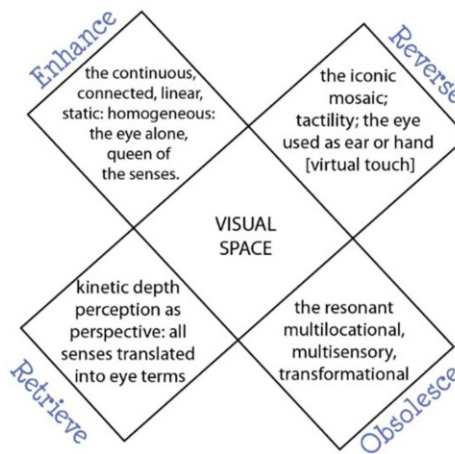


Figure 4. Visual space from McLuhan & McLuhan (1988, p. 205)

is disjointed, rearranged, unpredictable and irrational. In these spaces, our rational self lets us believe we are actually connecting to various spaces. In this delusional space, the irrational sensibility of the WMD interface sets us up to lose track of time and place. As we flow in and through virtual and physical spaces performing tasks in both, the flows collide and mingle in our minds. Each space offers its own notion of time. When they mix together our ability to keep pace with a rhythm becomes increasingly elusive and irrelevant. As such, the primacy of clock time and physical spaces are disputed in the digital age.

*Space of Flows*

Much like gazing out the window, with WMD’s our attention flows from physical space to virtual ones found behind glass. The content of digital media and our network society gives us the power to construct temporal spaces, expanding where we live and learn. For Manuel Castells “space organizes time in the network society” (2010, p. 79), a space he calls the “space of flows”. In the space of flows, our connection to diverse and distant physical spaces is achieved through circuitry, satellites and nodes or intersections. Castells suggests these spaces are “asymmetrically organized around the dominant interests specific to each social structure” (pp. 79–90). Our near seamless interconnectedness is the source of our retribalized sensibilities. Consider how each of us are connected at least as much by shared interests on line as we are by our neighbors. It is through this seamless convenience that we lose one ground and way of thinking for another – shifting our consciousness. As charted in [Figure 5](#), we can see how the space of flows might be known through the laws of media. Note that as a social structure the space of flows retrieves our notion of extra sensory perception while as a thought process it recalls Sigmund Freud’s “dream logic” (Gelernter, 2010). And while we obsolete physical spaces we also push aside rational and sequential thought. We need to consider what increased time in the space of flows does to the interests, values, and the conceptions of students.

*Time, Space and the Creative Mind*

“Joy, creativity, the process of total involvement with life I call *flow*.” Here, Mihaly Csikszentmihalyi (1990, preface) sees a state of flow in creativity because creativity is a space and time where someone is fully immersed or lost in their activity. Form and meaning result from the collision and interplay of otherwise unrelated forms. Like surrealist art and jazz music, creative solutions have long been held to come from the juxtaposition of disparate concepts or remote associates via serendipity, similarity,

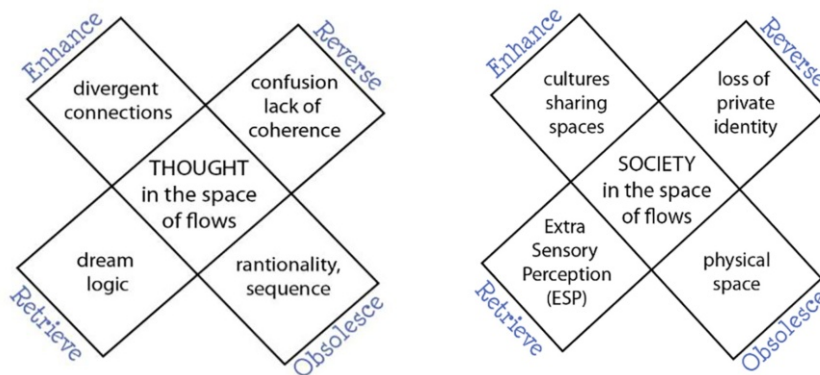


Figure 5. Space of flows in the Laws of Media: Society and Thought



or mediation (Mednick, 1962). Neuroscientists John Kounios and Mark Beeman (2009) followed Mednick's observation to find the *eureka* moments or creative incidents in the brain and found it manifest as distinct bursts of gamma energy in the participant brains' right hemisphere (RH). As such, dream logic and the audio-tactile spatial illusion spaces that WMD's nurture, while not making people creative, people creative, appear to echo creative processes where connections and novel ideas are made of otherwise loosely connected disparate concepts. Alternatively, the qualities that define the clock share ground with literacy and numeracy and other tasks performed in the left hemisphere (LH) including such conscious constructs as linear reasoning, logic, words and numbers, details, analysis and sequence. As a unified system, we may search our LH to solve analytical or factual problems and we rely on our RH to help us solve novel problems. We do a lot to train students to solve problems based in fact, and little to tackle the novel.

#### *A Creative Pedagogy for New Times*

With schools, for the most part, curricular and pedagogical changes remain modest – we teach and they are to learn in a system that guides us to solve problems through LH or logocentric thinking. Our curricular priorities and structure conflict with an audience who may be poised to more effectively solve problems creatively. With this imbalance, school reform should offer students a schooling program that nurtures the 4Cs: creative thinking, curiosity, critical thinking and collaboration, at least on par with the traditional 3Rs of reading, writing, and arithmetic. Reaching this equilibrium requires us to critically observe our students' learning and media ecologies.

As the “space of flows” (Castells, 2010) suggests, our global destinies are interwoven. Until recently, a child's world did not extend far beyond the physical spaces where they lived. Today's youth reside between their physical world and the temporality of cyberspace. By and large, adults are adapting to the new environment that our students were born into – they are the natives while we are the tourists. Students need to be equipped with relevant tools to gain control over *their* world, not the one we have known.

Inasmuch as the student's gaze shifts its fix from the board at front of the room in exchange for the personalized small screen, simultaneously classrooms no longer have to be fixed in time and space. Where modernity delivered textbooks and videos, our digital media offers students global connectivity. Students can know their world through a variety of interfaces and processes, such as conversations, games, and other expressive works. With WMD's our classrooms are fractured, multidirectional, and asynchronous – more acoustical. This can be embraced for its potentials or resisted for its distractions. While the WMD experience is more akin to a dream than to an essay, exchanging ordered logic for hyper-logic, when focused on a critical or creative task, the creative thinker may feel at home in these environments (Carr, 2010, p. 119).

Consider Marcel Duchamp's “Fountain” (1917). A readymade art form, “Fountain” was a urinal reoriented 90 degrees on its back and signed “R. Mutt, 1917”.

Duchamp's Fountain, though initially rejected and ridiculed (Saltz, 2006), later became the archetype for other artists to follow – where found objects placed in a foreign context offer us another way to realize new meaning from the form. "Fountain" exemplifies the type of creative idea that is or was alien to the rational order of modernity. For those steeped in LH thinking, such RH ideas and the experiences that nurture them may appear irrelevant or inaccessible, but to others they offer deep meaning. Recognizing this, we need to be cautious of a hemispheric hegemony where creative thinking and processes continue to be marginalized.

Sir Ken Robinson's notable TED Talk, *Do Schools Kill Creativity?* (2006) and his companion texts *The Element* (2009) and *Out of Our Minds* (2011) have challenged public education systems to put their money where their mouth is to assess current practices and reorient schooling towards nurturing whole brain thinkers – to do things differently.

Where people like Sir Ken Robinson aim to normalize and promote creative thinking, they do so in a largely antithetical schooling culture. We may rhetorically say that we want to encourage creativity, however our industrial hangover begs to differ. Our fixation with accountability, numeracy and literacy achievement data, timetables, subject-based departments, classrooms with student desks facing *Smart boards* that draws students to buttress the teacher's authority at the front of the room reinforce to modernity's order. Our conflict is internalized. Pulled in opposing directions we want schools to uphold the objectives of our industrial heritage while priming students with the savvy and sensitivities to succeed in the 21st century economy where creativity is a core skill (Florida, 2011; WEF, 2016). When we fail to see the contradiction, we increase the odds of employing strategies that exacerbate the problem.

For this reason, we should seriously probe whether efforts to enhance the 3Rs are exposing a reverse situation where schools will persist in killing creativity. Like Nova Scotia's *Time to Learn Strategy* (2002) that guides all school timetables and subject exposure, their *Action Plan for Education, 2015, The 3R's: Renew, Refocus, Rebuild* makes no claim nor provides evidence to address the concerns over creative development expressed by Robinson and Florida. Also missing is evidence of appreciation for the breadth and depth of digital media's impact on learning. The learning and media ecology shaping our world and our students appears to be happening independently of our government's optimistic remedies and faith in achievement data. The Minister is on target to achieve their first pillar to "build a modern education system" but, as we move beyond modernity to less predictable and increasingly dynamic times, we could do more to build a school system that mobilizes resources and curriculum to address the nature of the digital age. To this end, we could consider a range of approaches, such as:

1. *As digital media reroute time and space, can we steer it towards creative learning?*

It should be noted that though WMDs draw the users' attention from physical spaces towards ones which may echo or mirror creative processes, we should remain critical of claims that suggest WMDs are a panacea for the lack of student

engagement and creativity in teaching and learning. The various effects of their often seductive and engaging interface, deserves critical observation and consideration. Having said that, in their capacity to free us from the necessity of logocentric schedules and processes, to connect us to more people and spaces, and in their access to information and experiences, lay opportunities to reshape schooling. For teachers, allowing time and space for creativity is a worthy pursuit, as it is worth exploring how we might embed it to reshape or *flip* when, what, and how students learn, as well as the fundamental teacher-student relationship. Since learning is about making connections and creativity is the making of connections between disparate concepts, creative thinking has the potential to deepen understanding within all content areas. Along with opening new spaces and (non)sequences, digital media also offer audio-tactile sensory experiences to complement the visual. As classes need not persist in segregating music and movement from math or science from art, desks need not be in sequence to buttress the teacher's supremacy. In this new order, teachers will make better coaches than bosses.

The digital age offers opportunities to fashion our learning ecology's structures and strategies to suit more student-centered learning. Whether we own it or not, students will continue to augment their learning through such media and the more they augment without us, the less relevant we become. Also, if we insist on using new media to do old things we risk reinforcing linear teaching and antiquated priorities where students will use the device to escape from teachers through distraction. The lesson here is (a) if teachers do not ensure their relevance to students in a digital world, teachers may be displaced and (b) the implications are for public education systems most everywhere.

2. *Make time for life in learning.*

To achieve *eureka* moments where juxtapositions are made and new archetypes are invented, the space of time needs to be opened in schools. Actively seeking answers through conscious and linear processes will only lead to calculated solutions whereas creative solutions flourish in less rigid spaces. Time to play, relax, and distract the mind are needed if the subconscious is to arrive at unexpected, creative insights. If what Daniel Pink shares in *Drive* (2011) is true, that motivation comes from a combination of autonomy, mastery, and purpose, then affording time for students to follow their own interests and develop their own queries with us there. To offer skills to master, engages and empowers students to own and drive their learning.

3. *Employ strategies that encourage creative inquiry.*

While embedding more sensory and arts-based strategies throughout schooling is a good place to start, I wish to leave you with one strategy to enhance creativity in learning. Consider the Laws of Media as an instrument of creative inquiry. This is particularly apparent when probing our memories and experiences for

retrievals. A retrieval rings true when patterns of how one tool relates to and impacts us echoes a previous form. Finding such patterns often means tasking our subconscious to seek out and juxtapose lexical and semantic information from among a range of histories and experiences. Typically, when a retrieval is found after a long inward journey, it presents itself as an *aha* moment where awareness comes in a flash – the result of a creative process. Arriving at novel solutions grows from allowing for the unfettered flow and connecting of memories and ideas, hunting for retrievals is one such exercise. My recalls tend to come when I am relaxed, happy, and void of conscious thought, often in the shower.

#### 4. *Nourish the senses.*

If increased achievement and student engagement are the primary goals of a good curriculum, we would reach more students if we involve more of their senses. We have explored that with the onset of literacy our visual sense had dominated and largely pushed aside the development of other senses. In spite of this, we have not done enough to lead students to think critically about the visual text and other sensory phenomena. Though the visual arts and media studies do this, they are often marginalized or taught without the experience to lend critical insights into visual text where, as is, students will remain numb and susceptible to visual persuasion.

And, though schooling favours sight over the other senses, our priorities and structures reinforce this tradition. We might try to rebalance this by providing opportunities where students learn through tactility, movement, voice and sound. We can, for instance, employ devices like movement and voice in many disciplines beyond the arts, technology and physical education. By increasing the breadth and frequency of sensory experiences we might grow opportunities where students can know things “inside-out” (visceral knowing) or by the “palm of their hand” (tactile knowing) rather than just “the back of their hand” (visual knowing) or the “sound of their own voice” (acoustical knowing).

It is through the thoughtful and aware integration of digital media and sensory experiences that we further engage students. Along the way, we may also activate more centers of the brain, give new dimensions to a subject, and overall heighten each student’s capacity to learn. Fundamentally, the attention we pay to the shifts born of the digital age will define schooling in the 21st century.

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