

Innovation's Renewing Potential:
Seeing and Acting Mindfully within the Fecundity of Educative Experiences

Margaret Macintyre Latta & Susan Crichton

University of British Columbia Okanagan

Introduction

The formative nature of all sense making is fundamental to being human. As individual/collective meaning makers, it is this formative nature that is operatively interdependent within human engagement on an ongoing basis. Such an operative mode is understood as “taken for granted” by Dewey (1938) and, thus, he understands experience to be the “means and goal of education” (p. 89). In an earlier essay, Dewey (1929) describes the complementary “rhythm” inherent within this operative mode to be a “great force,” “release(ing)” meaning-making of all kinds through ongoing “construction and criticism” (p.139). Dewey is clear that it is within this rhythmic movement that learning takes place explaining that construction and criticism “cannot be separated because they are the rhythm of output and intake, of expiration and inspiration, in our mental breath and spirit” (p.139). Dewey’s (1938) characterization of experience’s “soundness” (91) to education as such a great force, offers a warning though. He states, “failure to take the moving force of an experience into account so as to judge and direct it on the ground of what it is moving into means disloyalty to the principle of experience itself” (p.38) Many current educational thinkers concur with Dewey’s warning and, yet, this moving terrain is foreign to many teachers and their students within curricular

enactment (e.g. Barone, 2001; Biesta, 2004; Bingham & Sidorkin, 2004; Block, 2001; Cochran-Smith, 2001; Day, 2000; Groundwater-Smith & Mockler, 2009; Macintyre Latta, 2013; Pinar, 2011). Costly consequences for all involved include the discounting of multiplicities within learning, thus, orienting toward sameness, resulting in generic learning products, and thwarting differences as catalysts in growing understandings. The literature indicates that given the over 40 years preoccupation with such compliance and uniformity concerning education policies and practices, educators worldwide have little familiarity cultivating educative experiences (see for example: Berliner & Biddle, 1995; Day, 2004; Groundwater-Smith & Mockler, 2009; Kemmis & Smith, 2008; Korthagen, 2001; Loughran, 2006; Pinar, 2011; Smith, 2006; Taubman, 2009). Therefore, the concrete opportunities for all involved to partake in educative experiences become estranged.

Dewey (1938) explicates how it is estranged understandings of experience in relation to education that allow external conditions to control curricular enactment rather than the interplay of internal and external conditions shaping the interactions and opportunities for continuity characterizing its enactment (p.42). This misunderstanding permeates Dewey's (1938) concern and continues to persist. Pinar (2009) characterizes such current estranged teaching practices as "severed" from curriculum, resulting in an impoverished understanding of curricular enactment, with teachers and students having little to no awareness of curriculum as "a subjectively animated intellectual engagement with others over specific texts" (p. 11). So, it is clear to us that the intellectual quality and character of the curriculum has been neglected and undermined, and that the long term costs have been vastly underestimated. Alongside Dewey, Pinar, and others, we argue

that the formative nature, the aesthetics of human understanding, needs to gain familiarity and lived expression through mindful curricular enactment. The associated significances, for all involved, reflect this paper's conceptual underpinnings of mindfulness as heightened awareness of the choices and lived consequences educators and their students make (MacDonald & Shirley, 2009), attending to the conditions and ongoing creation of learning contexts loyal to Deweyan experience.

Turning to Dewey's (1938) primary notion of *experience* in relation to Dewey's (1934) aesthetics, we seek much needed language for educators, students, and others to become familiar with and mindfully negotiate the curricular terrain, animated with and through other(s). Dewey explains how "art as experience" provides concrete practice with such aesthetics of human understanding, disclosing the ground marked by rhythmic movement. He explains, "It marks a way of envisaging, of feeling, and of presenting experienced matter so that it most readily and effectively becomes material for the construction of adequate experience..." (p.109). We find the connections to curricular enactment to be compelling. The language for curricular practices that this paper unfolds, is thus intended to mark a way "of envisaging, of feeling, and of presenting" the needed terrain for educators and others to attend to the rhythmic movement of construction and criticism. We refer to this rhythmic movement as "aesthetic play" (Macintyre Latta, 2001; 2013), understood to be integral to the makings of curricula. It is the serious investment in these makings that forms the needed sustenance within mindful curricular enactment that we envision as embracing Dewey's (1938) commitment to experience, giving lived expression to "a sound philosophy of education" (p. 91).

Aesthetic Play:

Opening Into and Cultivating the Needed Practice Ground

An “Innovative Learning Centre” (ILC) within a Faculty of Education provides the context to study, and gives lived expression to the rhythmic workings of experience through documenting a Maker Movement Day for practicing educators. Dewey’s (1938) commitment to “the idea that there is an intimate and necessary relation between the processes of actual experience and education” (p. 20) is at the heart of our Maker Day. The contemporary Maker Movement’s emphasis on studio-based learning attends to the processes of meaning making from within the processes itself (Martinez & Stager, 2013; Thomas & Brown, 2011). The rootedness of this thinking across time and traditions can be traced to many interested in revealing the experiential terrain encountered through such attention (see for example: Bakhtin, 1919/1990; Bourriaud, 1998; Crowther, 1993; Dewey, 1934; Eisner, 2002; Gadamer, 2000; Garrison, 1997; Greene, 1995; Granger, 2006; Hansen, 2005; Jackson, 1998; Kant, 1790/1952; Schiller, 1795/1954; Waks, 2009). In doing so, it draws attention to the inner learning necessities elicited through concrete involvement within the “processes of actual experience” (Dewey, 1938, p. 20) for all involved.

The ILC challenges notions of innovation that characterize it as a distinct quality in self, others, and situations, that is rare and special and, instead, returns to innovation’s etymological roots of *innovare*, to renew, for insights into its elemental and catalytic roles within educative experiences. Akin to Dewey’s (1929) complementary rhythm of construction and criticism, innovation’s rhythmic workings within a Maker Day learning experience, position ILC participants to continually seek, enlarge, and deepen

understandings through aesthetic play. Specifically, we consider how these workings might shape educators' lived curricular enactment through Deweyan experiential criteria of *interaction* and *continuity*, offering renewed potential for learners and learning, initiates the needed theorizing for seeing and acting mindfully within the fecundity of educative experiences. Dewey (1938) explains, "We have to understand the significance of what we see, hear, and touch. This significance consists of the consequences that will result when what is seen is acted upon" (p. 68). Elucidating the rhythmic workings of the terrain of aesthetic play brings out learning experiences' innovating powers and possibilities. But, heeding Dewey's warning, such attention to the movement of thinking within curricular enactment typically continues to be stilled, thwarting its powers and possibilities. Thus, we surmise that the nature and role of experience within education that is not instrumental or applied must be practiced.

The Maker Day experience provides an opening for educators to "reside" (Dewey, 1938, p.55) within experience's innovating workings. This paper chronicles how educators must practice the ongoing interactive receptivity while seeking continuity, as being integral to accessing the Deweyan (1938) movement of thinking at the heart of experience and education. The Maker Day experience enables all involved to begin to see and act within the "development and control of a living and moving experience" (p. 88). Such *rich*, *related*, *recursive*, and *rigorous* experiences (Doll, 2009), constitute the fecundity of this moving curricular terrain.

Continuity and Interaction: Maker Day's Experiential Function and Force

We conceptualize a Maker Day as an immersive professional development experience for educators (Crichton & Carter, 2014). We describe it as a facilitated event

requiring participant-volunteers to thoughtfully and fully engage in design thinking and creative problem finding. At the heart of the experience is the Maker ethos which "values learning through direct experience and the intellectual and social benefits that accrue from creating something shareable" (Martinez & Stager, 2013). We know that it is hard to share meaningfully things that we have not experienced deeply, suggesting if educators are to share the curricular significances of the Maker Movement with their students and colleagues, an immersive Maker Day experience might enable them to "own" the ideas and begin to feel confident within the learning terrain encountered.

We believe the purpose of Maker Day is to introduce participants to the principles underpinning the Maker Movement (Hatch, 2014), moving through distinct, yet related phases, accessing Deweyan (1938) continuity and interaction through experience. Maker Day is distinguished from a Maker Faire or a Maker Space. Participants in our interpretation of a Maker Day engage in design thinking, address design challenges or problem sketches, collaborate toward prototyping a design resolution or toward a group response, and continually adapt and reflect. A Maker Day is **NOT** the same thing as a Maker Faire, which typically is a celebration of the "arts, crafts, engineering, science projects and the Do-It-Yourself (DIY) mindset

(http://en.wikipedia.org/wiki/Maker_Faire). Nor is it a maker or hacker space that often is a "community-operated workspace where people with common interests, often in computers, technology, science, digital art or electronic art, can meet, socialize and/or collaborate" (<http://en.wikipedia.org/wiki/Hackerspace>). Based on our understandings to date, we suggest the goal of a Maker Day should be to encourage participants to experience making, and ongoing adaptation and reflection, through design thinking and

associated activities, fostering an agenda requiring active participation that takes shape through process. This characterizes design thinking as facilitated using Stanford's d.School materials

(https://dschool.stanford.edu/groups/designresources/wiki/ed894/The_GiftGiving_Project.html). Design thinking aligns nicely with the Maker Movement by helping makers consider what they would like to create, alongside why, and how to proceed.

We both share common understandings of making's powers and significances within learning/living that tells us that it is through the mindful "Taking of Making" (Crichton, 2013) in our schools that educators and their students might enact curriculum in formative ways. As such, curricular experience is an adapting, changing, building movement of thinking, allowing for the aesthetics of human understanding to mark authentic and creative ways for all to take part. Dewey (1938) conveys it to be necessarily social, assuming ongoing contact and communication (p.38). He (1934) characterizes the accompanying attitude as "playful," assuming commitment and interest in finding purpose from within a learning experience. It is this very act of play that Dewey (1934) denotes as movement. Concretely negotiating this movement through *envisaging*, *feeling*, and *presenting* encounters between self and other(s) characterizes aesthetic play's concomitant constructing and critiquing rhythmic movement. He identifies the two principles of *continuity* and *interaction* for "interpreting an experience in its educational function and force" (p. 42). Both principles are conceived as being "inseparable" (p. 43) and "in their active union"... providing "the measure of the educative significance and value of an experience" (p. 44-45). Continuity entails attending to the temporal movement of thinking within experience as past influences present and holds

implications for the future. Interaction entails attending concomitantly to the given internal and external conditions of all involved within situations. It is their “active union” through the constructing and critiquing movement in relation to other(s), that draws our attention. We seek the significances of the *function* and *force* of aesthetic play arising from the active union of continuity and interaction within meaning making of all kinds. Documenting the curricular terrain marking the Maker Day experience, surfaces five interrelated mindful modes of being that offer insights:

1. Meaning-Making’s Elemental Connectedness to Being Human

The Maker Day experience asks 80 participants in groups of four to grapple with the problem of collectively making a device to support/enable an aging population. And, though it is very tempting for some to immediately rush to a solution, identified facilitators for each group skillfully ensure that participants grapple with their own ideas alongside each other’s ideas, through an immersive yet semi-structured design plan.

A quick sketch (3 minutes) of a needed device, addressing and completing the task on an individual basis, gives visibility to each member of the group’s thinking. The sketching process itself allows participants to personally access and begin to articulate some of the challenges and opportunities embedded in the task. The shortcomings of solution- fixated thinking are foregrounded alongside the intrigue to see and understand what brings others to their particular device, are revealed through the sketches. The facilitator then asks participants to interview each other in pairs (4 minutes for each interview), explaining understandings of the challenges facing the aging population, while balancing varying pulls regarding staying at home with needs to go out in public for social, business, personal, or recreational needs. The interviewer is asked to take note

of aspects they find interesting or surprising. After the first set of interviews, facilitators ask each pair to follow up on aspects that intrigued them during the first interview. Stories are elicited and the importance of the device sketched by each participant becomes increasingly tangible with the emerging narratives infused with emotions and the cultivation of enhanced empathy.

Across all groups, a physical need to observe, gather, and reflect in varying ways, characterizes participation within the Maker Day experience underway. There is a deep kinship here with Dewey's (1934) notion of the "live creature," in continuous interaction with the environment through making meaning. Dewey (1910) describes such physiological need as holding the unease inciting curiosity (p. 31). He aptly relays how:

There is more than a desire to accumulate just information or heap up disconnected items...In the feeling, however dim, that the facts which directly meet the senses are not the whole story, that there is more behind them and more to come from them, lies the germs of intellectual curiosity. (p. 32)

Participant pairings within each group record their observations, gatherings, and reflections. We witness how these observations, gatherings, and reflections do, indeed, germinate the needed curiosity. A palatable energy compels the paths each pairing pursues. The context for each other's thinking is revealed and further connections and associations are sought. Dewey (1910) understands these pursuits for context, connections, and associations, to hold "suggestive powers" through functional dimensions of "ease", "range", and "depth" (p. 34-37). We see how suggestive ease variously enables individual/collective capacities to surrender to the experiential encounter of Maker Day. It is an ease insisting on reciprocity, concomitantly seeing and

responding to others as interactions call forth. The relational intersections that present themselves become a range of possibilities for participants to explore in more depth.

The uniquely personal natures of the paths of thinking are increasingly visible for all involved in Maker Day. The particularities brought to bear are diverse. The ease, range, and depth encountered suggest multiple fitting paths of inquiry. Dewey's (1910) description of the search for continuity as entailing "following up" and "linking together" particularities within these paths aptly conveys how continuity is sought and achieved across all groups (p. 39). Continuity is a found rhythmic order, dynamic in nature, manifesting growth that Dewey conveys as being infused with moments of "inception", "development", and "fulfillment" (p. 55). Such moments are foregrounded again and again as the groups distinctly rework and reorder their thinking in cycles, offering synthesis that concomitantly fulfills and carries forward into new relations through inception and development.

Dewey (1910/1997) states, "...one can teach others to think only in the sense of appealing to and fostering powers already active in them" (p. 30). Curiosity, suggestion, and orderliness as elemental human resources hold the genesis for mindful inquiry of all kinds. The Maker Day experience accesses these powers through positioning all that enter into it to turn to these elemental resources to make sense of the experience, acting as *function*-- drawing all involved into interactions with the relational complexities of the task, while acting as *force*--envisaging, feeling, and presenting the potentialities these elemental resources hold for the directions these inquiries take, through quests for continuity.

2. Meaning-Making's Embracing of the Given

Attention to what Dewey (1938) terms the “powers and purposes of those taught” (p. 45)-- the participants within Maker Day, very much forms and informs the materials for meaning making. Individual/collective belongingness is cultivated as group members share amongst themselves some of their histories, beliefs, strengths, and desires concerning the Maker Day task. The thinking that emerges is deliberately designed to respect and reflect these given contributions. Not to do so, as Dewey points out would be “to neglect the place of intelligence in the development and control of a living and moving experience” (p. 88). The powers and purposes take multiple forms, but revering and conversing with these as the materials for meaning making is the necessary starting place for Maker Day. It is a willingness to enter and dwell within the relationships present and already at play, that the generative process of design thinking invites. It is within the apprehension of these relationships that participants create and find collective meanings.

The partner interviews regarding the device for the aged proceed and the particulars of the undergirding thinking facilitate interest and prompt further considerations. These distinct qualities and relations form conjectures and projections as each participant is asked to reframe the task from the perceived understandings of their interviewee. Through time taken to delve into these ideas, multiple ways to address each partner's thinking are sketched and shared, generating alternatives. Evaluation of these ideas is discouraged at this stage, with emphasis placed on willingness to think otherwise with openness to possibilities. So, each participant can trace their thinking and its contribution to the developing movement of thinking. Dewey (1934) terms such

engagement, the *undergoings* and *doings* within experience that purposefully involves participants (p. 44). The undergoings entail the participatory ideas in the making and the doings entail the ongoing responding and organizing of these ideas. And, Dewey's description of how undergoing and doing is not simply alternating ways of operating but action and consequence joined in perception, becomes increasingly evident as, "What is done and what is undergone are thus reciprocally, cumulatively, and continuously instrumental to each other" (p. 50). Therefore, the undergoings and doings become the function and force of the individual/collective movements of thinking. Each group manifests different operative rhythms, punctuated "by the existence of intervals, periods in which one phase is ceasing and the other is inchoate and preparing" (Dewey, p. 56). Perception is their active union, cultivating capacities to concomitantly see and act on the materials each brings to the task. Attending to these given materials and finding ways to build these into meaningful connections, mindfully shapes the making tasks throughout. Such mindful shaping carries forward into each group's undergoings and doings as they select and work with concrete materials, building and adapting physical models of devices addressing the Maker Day task.

3. Meaning Making's Need of Other(s)

The attributes of evolving individual/collective ideations about the devices to enable mobility of the aged, generated through individual sketches and moving through the interviewing processes, foster new thinking. Dewey (1934) describes the meaning-making ground encountered to begin with *impulsion*, acknowledge *interdependency of self with surroundings*, learning through *resistance* and *obstacles*, and unfolding at the *junctures of old and new* experiences (pp. 58-60). Personal needs and interests initially

direct efforts. These efforts are then redirected as individuals convey and begin to attend to the active relations and connections each meet and negotiate, as thinking with and through others is made more accessible. Participant pairs grapple as they confront resistance and obstacles in each other's thinking. And, the iterative feedback as participant pairs each reconsider what they understand about each other's thinking, reveals how understandings are reached and extended at the conjunctures of the old and the new.

The interdependence of tensions and sustenance, and strengths and vulnerabilities through engagement with others, all gain greater visibility and tangibility through the design thinking process. The making experiences underway offer integrative opportunities to negotiate self-understandings alongside giving expression to enlarging perspectives. Dewey (1934) carefully explicates the "act of expression" as just such a developmental, unfolding process of self-formation and discovery.

It is increasingly evident across Maker Day participants that the thinking evolving is not simply the workings of an individual's interiority, but rather, purposefully inclusive of the narratives and reflections of others. Dewey (1934) terms the ongoing reflexivity a "double-change" (p.62), converting an activity into an act of expression (p.60). Making, as such a reflexive medium, assumes all involved enter into meaning making, remaking meaning again and again through the double-change of seeing other(s), hearing other(s), analyzing other(s), connecting other(s), and selecting with and through other(s).

Belongingness toward the shared thinking is cultivated across participants through such double changes, with the centrality of the other(s) constitutive of the self inciting a turn and re-turn to self-understandings. Dewey (1934) states, "For the uniquely distinguishing

feature of esthetic experience is exactly the fact that no such distinction of self and other exists in it, since it is esthetic in the degree in which organism and environment cooperate to institute an experience in which the two are so fully integrated that each disappears” (p. 249). Otherness holds function and force for mindful meaning making, very much “animated” as Pinar (2009) insists, with and through interactions with others. Maker Day reveals how individual/group understandings are progressively articulated, offering moments of continuity, unified through envisaging, feeling, and presenting interactions with other(s).

4. Meaning-Making’s Spatial/Temporal Agency

Dewey (1934) describes the interdependency of space with time conveying how, “Space...becomes something more than a void...it becomes a comprehensive and enclosed scene within which are ordered the multiplicity of doings and undergoings in which man [sic] engages. Time ceases to be either the endless and uniform flow or the succession of instantaneous points...it is an ordering of growth and maturations...” (p. 23). Space and time as characterized by Dewey is purposefully orchestrated into the design of Maker Day. From the onset of Maker Day, participants are immersed within a making space with a shared task to embrace. Group facilitators involve participants in a series of activities unfolding at a pace that ensures little room for individual/group procrastination. The experiential context is structured to incite inward personal associations while in the presence of productive interests and associations to engage.

Maker Day space/time is initially described as fast-paced by all involved. As participants begin to immerse themselves within the motion filled context, they find themselves unavoidably envisaging, feeling, and presenting their thinking. We are struck

by the speculation incited through design thinking, inviting associations and connections that positions individuals to risk what they know, value, assume, and believe. Speculative sensibilities encourage contingencies, tensions, and difficulties foregrounding differences, as inherent within the undertaking. Speculative sensibilities thrive on the sustenance found within the differences encountered. And, it is such sustenance that we find invests group participants in empathizing, defining, and ideating, toward unanticipated ideas, building and testing a common prototype addressing the Maker Day task.

Dewey (1938) explains that it is the sustenance gained through attention to processes and practices throughout experience that occasions the kind of present that “has a favourable effect upon the future” (Dewey, 1938, p. 50). Processes and practices of the space/time of Maker Day attend to the present’s potential. Such processes and practices hold function and force that invests in individual/collective growth. Dewey (1938) explains that growth’s organization is dynamic, needing both space and time. He explains, “Time as organization in change is growth and growth signifies that a varied series of change enters upon intervals of pause and rest; of completion that becomes the initial points of new processes of development” (p. 23). The Maker Day space for “time as organization in change” forms the task. It is structured to bring the present’s potential to immediate attention. Participants negotiate the present through pauses, rests, and new processes, embedded within the experiential processes/practices of design thinking.

We observe how control of the direction of thinking is oriented away from being imposed across groups. Varying degrees of individual/collective confidence in control for the directions of thinking coming from within the moving experience itself are displayed.

But, each group's attention is recursively reoriented accordingly by facilitators. Dewey (1902) emphasizes the key role of such facilitation stating, "the teacher knows neither what the present power, capacity, or attitude is, nor yet how it is to be asserted, exercised, and realized," but assumes that it is the learners' "present powers which are to be exercised," and the learners' "present attitudes which are to be realized" (p. 209). As groups collaboratively negotiate their present powers and attitudes, moving toward developing varied prototypes, they share moments of continuity that reflect and respond to the particular interactions of each group's meaning making experience. The mindful agency gained by all participating within Maker Day speaks to the unifying commitment toward the given task that groups cultivate and display, as control of this moving force is increasingly understood as functioning from within the spatial/temporal making experience.

5. Meaning-Making's Interdependence with Imagination,

Instilling Embodied Understandings

Dewey's (1934) conceptualization of imagination as a "gateway," consciously adapting the new and the old (p.267), fittingly conveys the manifesting Maker Day group conversations. This invigorating imaginative presence challenges persistent understandings of imagination as a special human gift. Instead, imagination in varying degrees concretely permeates the experiential whole. But, as Egan (1992) points out, imagination's complexity goes largely unseen even though it brings together "perception, memory, idea generation, emotion, metaphor, and no doubt other labeled features of our lives;"(p. 3). The interactive workings entailed are impossible to wholly articulate, make explicit and visible, and unpack in words and distinctive qualities. But,

individual/collective capacities to envision more and more potential in the thinking that moves and complicates the group conversations become evident through the evolution and resolution of the Maker Day task. The evolving accounts put group members in touch with each other's stories of experience and perceptions that figure into the Maker Day task. Through listening, telling, and attending to body language alongside voiced tone and expression, these shared accounts draw all involved into imagining individual's experiences as their own. So, a multisensory making experience that is responsive and relational emerges for all involved.

We observe how the multisensory engagement invites translating room for all involved through deliberation, intuition, anticipation, natality, and enlarged realizations. It is Dewey's (1934) claim that sense "illuminates" understandings through meanings concretely embodied within experience (p.22). The responsive and relational nature of such sense making actively assumes individual/collective openness alongside commitment to attend to ensuing interactions. And, it is this receptive givenness that Dewey characterizes as "roominess, a chance to be, live and move" (p. 209), that takes life throughout Maker Day.

Roominess for deliberation is revealed as individual/collective thinking takes many iterative forms, organized and reorganized in what Dewey (1922) terms "dramatic rehearsals"(p. 190) "projecting the course" (p. 194). He identifies how within deliberation room for flexibility is embraced, remaking old aims and habits and instilling new possibilities (p. 198). Roominess for intuition is revealed as individual/collective thinking elicits and accepts felt understandings, calling participants to surface what is familiar, yet newly encountered. Dewey (1934) explains how intuition "marks the place

where the formed dispositions and the immediate situation touch and interact” (p. 266). Roominess for anticipation is revealed as the parts-to-whole movement within each group’s meaning making process toward summation is envisioned and re-envisioned throughout, “tak[ing] up something from those which have gone before and modify[ing] in some way the quality of those which come after” (Dewey, 1938, p. 35). We observe how the opportunities to appreciate the cumulative understandings en-route are embodied. These embodied impacts are key to the continued anticipatory movement of each groups’ thinking. And, such embodied understandings foster more and more roominess for natality, birthing of new ideas, which are continually negotiated as “the old, the stored material” is “literally revived, given new life and soul through having to meet a new situation” (Dewey, 1934, p. 60). Seeking such life and soul assumes roominess for enlarging and deepening understandings that participants experience and embrace as always in the making. Thus, it is through mindful bodily engagement of deliberation, intuition, anticipation, natality, and enlarged understandings, that interactions open and compel participants’ multi-sensory attention. The bodily memories are, thus, internalized and instilled through “surrender” and “reflection” (Dewey, 1934, p. 53). Comprehension wholly entails such participatory trust in process. As Dewey (1972) claims, inhering accordingly, “comes upon” embodied imagination and “awakens” the “penetrating” understandings to be made and re-made there (172-173).

Some Maker Day groups reveal just how powerful the moving function and force of imaginative understandings that penetrate their making experiences can be. As these groups publically share their prototypes, they talk about them as springboards, suggesting even more possibilities than ever envisioned from the onset and, yet, very much relayed

as being incomplete. Rather than defending their group thinking to date, these prototypes are conveyed as unifying artifacts, marking meaning-making ventures, and cohering educative significances and values with potential directions deemed worthy of further pursuit.

Reframing Educators' Attention: The Renewing Interplay of Interaction & Continuity through Mindful Modes of Being

The mindful modes of being that characterize the unfolding terrain of Maker Day expect participants to enter into the task as meaning makers, gaining cognizance and appreciation of the given particulars of context, valuing others, moving within the space/time of situation, and eliciting imaginative possibilities that instill embodied understandings. These mindful modes orient all involved toward continual opportunities to reflect, adapt, and grow individual/collective thinking. This recursive movement of thinking is at the heart of what it means to educate. In the preface to *Experience and Education* Dewey (1938) insists on the importance of reorienting education toward “larger and deeper issues” ...suggesting “their proper frame of reference” (p. 6). It is reorientation toward these issues and proper frames of reference that the mindful modes of being access through the ongoing interplay of interaction and continuity during Maker Day. The aesthetic play of interaction and continuity concomitantly values the contingent ground of all meaning-making, assuming openness to understandings disclosed en-route while navigating the necessary movement for new and enlarged ways to see and engage the world. Meaning-making as elemental to being human, insists upon the interactions of curiosities and arising suggestions as holding the resources for found order, inhering continuity, while finding direction again and again throughout the making process.

Meaning-making as embracing of the given, values and respects the interacting undergoings and doings of situations, conversing with the ensuing relational intersections, inhering continuity. Meaning-making as needing other(s), fosters understandings of self that are constituted and reconstituted always through interactions in relation to other(s). Meaning-making as spatial/temporal negotiation, demands mindfulness of the presenting interacting circumstances alongside speculative sensibilities seeking continuity. Meaning-making as interdependent with imagination, instilling embodied understandings, coheres a lived continuity of sense that comprehends through the entire interacting body.

The envisaging, feeling, and presenting terrain of Maker Day draws out participatory investment through aesthetic play. Traversing the interplay of interaction and continuity is catalytic, reorienting educators' frames of reference toward the functions and forces of attending to curricular enactment as a rhythmic movement of thinking. Such frames of reference orient as Dewey (1938) states, toward the "actual needs, problems, and possibilities" (p.6). Orienting educators accordingly is grounded as Hansen (2005) points out toward the importance of educators trusting their capacities to derive or draw from curricular situations in order to facilitate these capacities in their students (p. 58). Dewey (1938) characterizes such attunement to process as the capacity to rise to the needs of each curricular situation with "attentive care...devoted to the conditions which give each present a worthwhile meaning" (p. 49). The responsive/responsible attention required according to Dewey (1943) instills momentum in all involved through personal interest, insight, and power (p. 149). The mindful modes of being elicited through Maker Day foster educators' capacities to see what is a stake in

given curricular situations and further the movement of thinking. Reframing and reorienting educative practices accordingly accesses the much-needed fecundity for genuine learning within educative settings of all kinds. But, it is only within practicing such mindful movement, traversing the fertile terrain exposed, providing access to matters reframing education, that we envision the kinds of curricular conversations happening in classrooms that release meaning-making that matters, prompting educators' capacities to see and act upon them.

Maker Day emphasizes to both of us the much-needed educator practice alongside the much-needed concrete connections to curricular enactment/translation. We are heartened to note "...how quickly people's imagination, curiosity, and courage are renewed with just a small amount of practice and encouragement" (Kelley & Keeley, 2013, p. 4 – 5). Innovation's renewing capacities for curricular enactment are located at the conjuncture of interaction and continuity, and the potential for rich, related, recursive and rigorous (Doll, 2009) curricular experiences awaits their discovery.

We conclude by emphasizing that we are not naïve. Maker Day is not the answer. Dewey (1938) argues vehemently against such a stance, seeing such answers as 'the greatest danger' to education (p. 90). But, we did find that within a Maker Day experience, educators initiate the theorizing for seeing and acting within the fecundity of educative experiences; theorizing, that is, as Garrison (2013) unpacks as disclosing "the functional interdependency of theory and practice in production" (p. 17). So, it is critical that educators have opportunities to renew again and again the significances of such learning terrain, finding a lived curricular language to articulate to self and others the richness, relatedness, recursiveness, and rigour of its enactment. "Acknowledging them

[significances] within action” (Dewey, 1916, p. 178) forms innovation’s renewing potential and coheres the hope we find within Maker Day for building upon and further developing educators’ mindful capacities for such curricular enactment across all disciplines and interests.

References

- Bakhtin, M. M. (1919/1990). *Art and answerability: Early philosophical essays*. Austin, TX: University of Texas Press.
- Barone, T. (2001). *Touching eternity: The enduring outcomes of teaching*. New York: Teachers College Press.
- Berliner, D. C., & Biddle, B. J. (1995). *The manufactured crisis: Myths, fraud, and the attack on America’s public schools*. New York: Addison-Wesley. (Republished by Harper Collins).
- Biesta, G. (2004). Mind the gap! In C. Bingham & A. Sidorkin (Eds.), *No education without relation* (pp.11-22). New York, NY: Peter Lang.
- Bingham, C., & Sidorkin, A. M. (Eds.). (2004). *No education without relation*. New York: Peter Lang.
- Block, A. A. (2001). *I’m only bleeding: Education as the practice of social violence against children*. New York: Peter Lang.
- Bourriaud, N. (1998). *Relational aesthetics*. France: Les Presses du Réel.
- Cochran-Smith, M. (2001). Constructing outcomes in teacher education: Policy, practice and pitfalls. *Education Policy Analysis Archives*, 9(11), 1-57.
- Crichton, S. (2014). Taking Making into an Institution – Embracing the Maker Movement to Signal Innovation. *Proceedings of the 9th International Conference*

- on eLearning* (ICEL), Hosted by The Federico Santa María Technical University, Valparaiso, Chile 26-27 June.
- Crichton, S. & Carter, D. (2014). *Maker Day: A toolkit*. Available from <http://blogs.ubc.ca/centre/2014/02/06/maker-day-toolkit/>
- Crowther, P. (1993). *Art and embodiment*. Oxford, England: Clarendon Press.
- Day, C. (2000). Stories of change and professional development: The costs of commitment. In C. Day, A. Fernandez, T. Hauge, & J. Moller (Eds.), *The life and work of teachers: International perspectives in changing times* (pp. 109-129). London: Falmer.
- Day, C. (2004). *A passion for teaching*. New York: Routledge.
- Dewey, J. (1902). *The child and the curriculum*. Chicago, IL: University of Chicago Press.
- Dewey, J. (1910). *How we think*. New York, NY: Dover.
- Dewey, J. (1922). *Human nature and conduct*. New York, NY: Holt.
- Dewey, J. (1934). *Art as experience*. New York: Capricorn Books.
- Dewey, J. (1938). *Experience and education*. New York, NY: Touchstone.
- Dewey, J. (1929/1984). *John Dewey: The later works, 1925-1953, Volume 5: 1929-1930*. Edited by Jo Ann Boydston, Carbondale & Edwardsville: Southern Illinois University Press.
- Dewey, J. (1943/1990). *The school and society*. Chicago, IL: University of Chicago Press.

- Dewey, J. (1972). *The early works of John Dewey, 1882-1898 (Vol. 5): Early essays, the early works* (Ed. by J. Boydston). Carbondale, Il: Southern Illinois University Press.
- Doll, W. (2009). The four R's—An alternative to the Tyler rationale. In D. J. Flinders & S. J. Thornton (Eds.), *The curriculum studies reader* (3rd. ed., pp. 348-361). New York: Routledge.
- Egan, K. (1992). *Imagination in teaching and learning: The middle school years*. Chicago, Il: University of Chicago Press.
- Eisner, E. W. (2002). *The arts and the creation of mind*. London: Yale University Press.
- Gadamer, H. (2000). *Truth and method*. New York: Continuum.
- Garrison, J. (1997). *Dewey and eros: Wisdom and desire in the art of teaching*. New York: Teachers College Press.
- Garrison, J. (2013). 2012 Dewey Lecture: Making meaning together beyond theory and practice. *Education and Culture*, 29 (2), 5-13.
- Granger, D. A. (2006). *John Dewey, Robert Persig, and the art of living: Revisioning aesthetic education*. New York: Palgrave Macmillan.
- Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco: Jossey-Bass
- Groundwater-Smith, S., & Mockler, N. (2009). *Teacher professional learning in an age of compliance: Mind the gap*. London: Springer.
- Hansen, D. T. (2005). Creativity in teaching and building a meaningful life as a teacher. *Journal of Aesthetic Education*, 39(2), 57-68.
- Jackson, P. (1998). *John Dewey and the lessons of art*. Boston: Yale University Press.

- Kant, I. (1790/1952). *The critique of judgment*. Oxford, England: Clarendon.
- Kelley, T. & Kelley, D. (2013). *Creative confidence: Unleashing the creative potential within us all*. New York: Crown Business.
- Kemmis, S., & Smith, T. J. (2008). *Enabling praxis: Challenges for educators*. Rotterdam: Sense.
- Korthagen, F. (2001). *Linking practice and theory: The pedagogy of realistic teacher education*. Mahwah, NJ: Lawrence Erlbaum.
- Loughran, J. (2006). *Developing a pedagogy of teacher education: Understanding teaching and learning about teaching*. New York: Routledge.
- Loughran, J. (2010). *What expert teachers do: Enhancing professional knowledge for classroom practice*. New York: Routledge.
- MacDonald, E. & Shirley, D. (2009). *The mindful teacher*. New York: Teachers College Press.
- Macintyre Latta, M. (2001) *The Possibilities of Play in the Classroom: On the Power of Aesthetic Experience in Teaching, Learning, and Researching*. New York: Peter Lang.
- Macintyre Latta, M. (2013). *Curricular conversations: Play is the (missing) thing*. New York: Routledge.
- Martinez, S. L. & Stage, G. (2013). *Invent to learn: Making, tinkering, and engineering in the classroom*. CA: Constructing Modern Knowledge Press.
- Pinar, W. F. (2009) *The worldliness of a cosmopolitan education: Passionate lives in public education*. New York: Routledge.

- Pinar, W. F. (2011). *The character of curriculum studies: Bildung, currere, and the recurring question of the subject*. New York: Palgrave Macmillan.
- Schiller, F. (1795/1954) *On the aesthetic education of man in a series of letters*. New York: Frederick Unger.
- Smith, D. (2006). *Trying to teach in a season of great untruth: Globalization, empire and the crises of pedagogy*. Rotterdam, The Netherlands: Sense Publishers.
- Taubman, P. M. (2009). *Teaching by numbers: Deconstructing the discourse of standards and accountability in education*. New York: Routledge.
- Thomas, D. & Brown, J. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change*. CreateSpace Independent Publishing Platform, Retrieved from <https://wwwcreatespace.com/>.
- Waks, L. J. (2009). Inquiry, agency, and art: John Dewey's contribution to pragmatic cosmopolitanism. *Education and Culture*, 25(2), 115-125.