INTRODUCTION
An Innovative Learning Centre (ILC) within a Faculty of Education provides the forum to study and give lived expression to the rhythmic workings of experience through documenting a Maker Movement Day for practicing educators. Dewey’s commitment to “the idea that there is an intimate and necessary relation between the processes of actual experience and education” is at the heart of our Maker Day (1938, *Experience and Education*, 20). The contemporary Maker Movement’s emphasis on studio-based learning attends to the experiences of meaning making from within the experiences themselves. The rootedness of this thinking across time and traditions can be traced to many interested in revealing the experiential terrain encountered through such attention. In doing so, it draws attention to the inner learning necessities elicited for all involved through concrete involvement within the Deweyan “processes of actual experience” (Dewey 1938, *Experience and Education*, 20).

We conceptualize a Maker Day as an immersive professional development experience for educators. At the heart of the experience is the Maker ethos, which Martinez and Stager (2013, *Invent to Learn*, 29) state “values learning through direct experience and the intellectual and social benefits that accrue from creating something shareable.” 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 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 a shared agenda requiring active participation that takes shape through process. We both share a common understanding of making’s powers and significances within learning/living that tells us that it is through the mindful “Taking of Making” in our schools that educators and their students might enact curriculum in formative ways.

It is the formative nature of all sense making as fundamental to being human that is primary to Dewey’s notion of experience understood as the “means and goal of education” (1938, *Experience and Education*, 89). In an earlier essay,
Dewey (1988) describes the complementary “rhythm” incited within his characterization of experience to be a “great force,” “release(ing)” meaning making of all kinds through ongoing “construction and criticism.” Dewey’s characterization of experience’s “soundness” to education as such an inseparable, pervasive force, offers a warning, though (1938, *Experience and Education*, 91). 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” (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. Therefore, the concrete opportunities for all involved to partake in educative experiences become estranged.

Dewey emphasizes that when the qualities of experience—including interaction and continuity—are ignored over and over again, they become increasingly estranged. The result is that external conditions then tend to control curricular enactment rather than the interplay of internal and external conditions shaping the interactions and opportunities for continuity characterizing its enactment (Dewey 1938, *Experience and Education*, 42). This misunderstanding permeates Dewey’s concern and continues to persist. William Pinar (2009, 11) 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.” 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 this formative nature, the aesthetics of human understanding, needs to gain familiarity and lived expression through sustained 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, attending to the conditions and ongoing creation of learning contexts loyal to Deweyan experience. 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” (Dewey 1934, *Art as Experience*, 109). We find the connections to curricular enactment compelling. The lived 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,” understood to be integral to the makings of curricula, giving lived expression to “a sound philosophy of education.”
CONTINUITY AND INTERACTION:  
MAKER DAY’S EXPERIENTIAL FUNCTION AND FORCE

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 roots of *innovare*, to renew, for insights into its elemental and catalytic roles within educative experiences. Akin to Dewey’s 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 *continuity* and *interaction*, initiating the needed theorizing for seeing and acting mindfully within the fecundity of educative experiences.12 The Maker Day experience provides an opening for educators to “reside,” seeing and acting accordingly.13

Our particular Maker Day experience asks 80 educators in groups of 4 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, through an immersive yet semi-structured design plan. This plan carefully facilitates participants through design thinking’s interrelated phases of sketching initial personal ideas, listening to others’ ideas, in-depth attending and empathizing with others, reframing ideas, generating alternatives, reflective iterations, and building and testing devices. Dewey’s two principles of continuity and interaction for “interpreting an experience in its educational function and force” are key to the design plan. Both principles are conceived as being “inseparable” and “in their active union,” providing “the measure of the educative significance and value of an experience” (Dewey 1938, *Experience and Education*, 42–45). It is their “active union” through the constructing and critiquing movement in relation to other(s) that draws our attention during the Maker Day experience. We seek the significances of the *function* and *force* of aesthetic play, the rhythmic movement arising from the active union of continuity and interaction within participants’ meaning making. Documenting the curricular terrain marking the Maker Day experience reveals five interrelated mindful modes of being that offer insights, which follow.

1. Meaning Making’s Elemental Connectedness to Being Human

A quick sketch of a needed device—addressing and completing the task on an individual basis—gives visibility to each group member’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.
Stories are elicited, and the importance of the device sketched by each participant becomes increasingly tangible through 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. There is a deep kinship here with Dewey’s notion of the “live creature,” in continuous interaction with the environment through making meaning (1934, *Art as Experience*, 3–19). Dewey describes such physiological need as holding the unease inciting curiosity (1910, *How We Think*, 11). The context for each other’s thinking is revealed and further connections and associations are sought. Dewey understands these pursuits for context, connections, and associations to hold “suggestive powers” (34–37). Continuity is the rhythmic order found in the process of pursuing these suggestions. Dewey conveys the manifesting growth as infused with moments of “inception,” “development,” and “fulfillment” (55). Such moments are foregrounded again and again as the groups distinctly rework their thinking. We observe how curiosities, suggestions, and order-finding are elemental human resources holding function and force for mindful inquiry of all kinds.

### 2. Meaning Making’s Embracing of the Given
Attention to what Dewey (1938, *Experience and Education*, 45) terms the “powers and purposes of those taught”—in our case, the participants within our Maker Day experience—forms and informs the materials for meaning making. Individual/collective belongingness is cultivated as group members share among themselves some of their histories, beliefs, strengths, and desires concerning the Maker Day task. 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” (88). The thinking that emerges is deliberately designed to respect and reflect these given contributions.

The partner interviews regarding the device for the aged proceed, and the particulars of the undergirding thinking facilitate interest and prompt further considerations on reframing the task. Evaluation of these ideas is discouraged at this stage, with emphasis placed on the willingness to think otherwise, remaining open to new possibilities. Dewey’s explanation of how participatory doings and undergoings are not simply alternating ways of operating, but rather action and consequence joined in perception, becomes increasingly evident. 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,” cultivating function and force to concomitantly see and act on the materials each brings to the task (Dewey 1934, *Art as Experience*, 56). Therefore, the varied processes and related products are unique to each groups’ seeing/acting experiences.

### 3. Meaning Making’s Need of Other(s)
The attributes of evolving ideas about the devices conceived to enable the mobility of the aged, generated through individual sketches and moving through the interviewing processes, foster new thinking. Dewey describes the meaning making ground
encountered to begin with *impulsion*, acknowledging *interdependency of self with surroundings*, negotiating *resistance* and *obstacles*, and unfolding at the *junctures of old and new experiences* (Dewey 1934, *Art as Experience*, 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 meets as thinking with and through others is made more accessible. Pairs of participants grapple as they confront resistance and obstacles in each other’s thinking, and the iterative feedback, as they 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.

It is increasingly evident across Maker Day participants that the thinking evolving is not simply the workings of an individual’s interiority, but is rather purposefully inclusive of the narratives and reflections of others. Dewey (1934, *Art as Experience*, 62) terms the ongoing reflexivity a “double-change,” converting an activity into an act of expression. Making, as such a reflexive medium, assumes that 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 with 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. Otherness holds function and force for mindful meaning making, very much “animated” as Pinar insists, with and through interactions with others (Pinar 2009, 11). Maker Day reveals how individual/group understandings are progressively articulated, offering moments of continuity and unified through interactions with other(s).

4. Meaning Making’s Spatial/Temporal Agency

Dewey describes the interdependency of space and time: “Space . . . becomes a comprehensive and enclosed scene within which are ordered the multiplicity of doings and undergoings in which man [sic] engages. Time . . . is an ordering of growth and maturations” (1934, *Art as Experience*, 23).¹⁵ Space/time, as characterized by Dewey, is purposefully orchestrated into the design of Maker Day. From the onset of the experience, participants are immersed in a making space with a shared task to embrace and in search of an appropriate pace and way to proceed.

Maker Day space/time is described as fast-paced by all involved as they get underway. As participants begin to immerse themselves within the motion-filled context, they find themselves confronting 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. They thrive on the sustenance found within the differences encountered. It is such sustenance that we find invests group participants in empathizing, defining, and ideating, toward unanticipated ideas, addressing the Maker Day task.
Dewey explains that it is the sustenance gained through attention to processes and practices throughout experience that occasions the kind of present that “has a favorable effect upon the future” (1938, *Experience and Education*, 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 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” (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 the purposeful pauses, rests, and new processes embedded within the experiential practices of design thinking.

We observe how control of the direction of thinking is oriented away from being imposed across groups, toward coming from within each group’s ensuing moving experience of meaning making. Each group’s attention is recursively reoriented accordingly by facilitators as warranted. Dewey emphasizes the key role of such facilitator guidance, stating that “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” (Dewey 1902, *The Child and the Curriculum*, 209). The mindful agency gained by all individuals 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 to function from within the spatial/temporal making experience.

5. Meaning Making’s Interdependence with Imagination, Instilling Embodied Understandings

Dewey’s conceptualization of imagination as a “gateway,” consciously adapting the new and the old (1934, *Art as Experience*, 267), nicely conveys the manifesting Maker Day group conversations. This conceptualization challenges persistent understandings of imagination as a special human gift. Instead, imagination in varying degrees concretely permeates the experiential whole. But, as Egan 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” (1992, 3). The interactive workings entailed are impossible to wholly articulate, make explicit and visible, and unpack in words and distinctive qualities. However, 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 multisensory engagement invites translating room for all involved through deliberation, intuition, anticipation, new ideas, and enlarged realizations. It is Dewey’s claim that sense “illuminates” understandings through meanings concretely embodied within experience (1934, *Art as Experience*, 22). The responsive and relational nature of such sense making actively assumes individual/collective openness alongside commitment to attend to ensuing interactions. It is this receptiveness that Dewey characterizes as “roominess, a chance to be, live and move” that emerges throughout Maker Day (209).

Roominess for deliberation is revealed as individual/collective thinking takes many iterative forms, organized and reorganized in what Dewey terms “dramatic rehearsals . . . projecting the course” (1922, *Human Nature and Conduct*, 190, 194). He identifies how within deliberation, room for flexibility is embraced, remaking old aims and habits and instilling new possibilities. Roominess for intuition is revealed as individual/collective thinking elicits and accepts felt understandings, calling participants to bring to the surface what is familiar, yet newly encountered (1922, 198). Dewey explains that intuition “marks the place where the formed dispositions and the immediate situation touch and interact” (Dewey 1934, *Art as Experience*, 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, *Experience and Education*, 35). We observe how the opportunities to appreciate the cumulative understandings en route are concretely seen and acted upon. These embodied results are key to the continued anticipatory movement of each groups’ thinking. Such embodied understandings foster more and more roominess, birthing new ideas that are continually negotiated as “the old, the stored material” that is “literally revived, given new life and soul through having to meet a new situation” (Dewey 1934, *Art as Experience*, 60). Thus, it is through mindful bodily engagement of deliberation, intuition, anticipation, new ideas, and enlarged understandings that interactions open and compel individual/collective participation. The bodily memories are thus internalized and instilled through “surrender” and “reflection” (53). Comprehension wholly entails such participatory trust in process. As Dewey claims, inhering accordingly, comprehension “comes upon” embodied imagination and “awakens” the “penetrating” understandings to be made and re-made there (1972, *The Early Works of John Dewey*, 172–73).

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 publicly 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, revealing 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 and 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 ongoing 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 insists on the importance of reorienting education toward “larger and deeper issues,” suggesting “their proper frame of reference” (1938, 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. Thus, it assumes openness to understandings disclosed en route while navigating the necessary movement for new and enlarged ways to see and engage the world.

The envisaging, feeling, and presenting elements of Maker Day spawns participatory investment through aesthetic play. Traversing the interplay of interaction and continuity, educators’ frames of reference are reoriented toward the functions and forces encountered through attending to curricular enactment as a rhythmic movement of thinking. Such frames of reference orient, as Dewey states, toward the “actual needs, problems, and possibilities” (1938, *Experience and Education*, 6). Orienting educators accordingly is grounded, as Hansen (2005) points out, by the importance of educators trusting their capacities to derive or draw from curricular situations in order to facilitate these capacities in their students. Dewey characterizes such attunement to process as the capacity to respond to the needs of each curricular situation with “attentive care . . . devoted to the conditions which give each present a worthwhile meaning” (1938, *Experience and Education*, 49). The responsive/responsible attention required, according to Dewey (1943/1990, *The School and Society*, 149), instills momentum in all involved through personal interest, insight, and power. The mindfulness elicited through Maker Day fosters 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 learning terrain exposed, that we envision the kinds of curricular conversations happening in classrooms which release meaning making that matters. Innovation’s renewing capacities for curricular enactment are located at the conjuncture of interaction and continuity, and the potential for rich curricular experiences awaits their discovery, providing access to matters reframing education.

We conclude by emphasizing that we are not naïve. Maker Day is not the complete answer to the conduct of mindful curricular enactment in classrooms. Dewey (1938, Experience and Education, 90) argues vehemently against such stances, seeing such answers as “the greatest danger” to education. However, 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, that Garrison (2013, 17) explains as disclosing “the functional interdependency of theory and practice in production.” Thus, it is critical that educators have opportunities to renew again and again the significances of such learning terrain. “Acknowledging [the learning significances] within action” forms innovation’s renewing potential, and coheres with the hope we find within Maker Day for building upon educators’ mindful capacities for such curricular enactment across all disciplines and interests (Dewey 1916, Democracy and Education, 178).

NOTES


5. For more discussion of Maker Days as professional development, see Susan Crichton and Deborah Carter, “Maker Day Toolkit,” *the centre: a very Innovative Learning Centre* (blog), http://blogs.ubc.ca/centre/2014/02/06/maker-day-toolkit/.

6. Design thinking is characterized as facilitated using Stanford’s d.school materials (Stanford University, *Stanford d.school’s Design Thinking Resources Center*, https://dschool.stanford.edu/groups/dresources/).


12. Ibid, 42.

13. Ibid, 55.


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