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Liberating from literalness: Making space for meaningful forms of abstraction

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There is a need for some alternative approaches to the way that undergraduate teacher education programs have traditionally been delivered. Our warrant for this assertion is derived, in the first instance, from the work of Aronowitz and Giroux who have argued that there are many different signs of a crisis of cognition within all levels of education. Twenty years later the conditions that they described seem even more entrenched. This paper argues for a fresh inquiry into the deeper logics of learning and teaching, by drawing primarily on the work of James, Dewey, Kierkegaard, Britzman and Mackay. There is also a brief inclusion of anecdotes from some initial applications of these theories into our own practice.

Writing in the mid 1980s Aronowitz and Giroux (1985) described the issue of conceptual illiteracy in education. They asserted that “Students of all social classes exhibit a tendency towards literalness, that is, seem unable to penetrate beyond the surfaces of things to reach down to those aspects of the object that may not be visible to the senses” and “the problem of abstraction becomes a major barrier to analysis because students seem enslaved to the concrete”.

In this paper we accept, in principle, the assertions made by Aronowitz and Giroux. In particular we support their concern about surface level thinking. Our primary motivation is to follow their lead in order to better understand how and why such thinking occurs and consider the implications for teacher education.

Before proceeding further we need to offer a caveat. We do not believe that such cognitive characteristics are an inbuilt feature of childhood or certain forms of youth. In other words we want to avoid any association to a fundamentalist reading of Piaget that suggests abstract thinking is a marker of cognitive maturity while concrete, surface thinking is a symbol of immaturity or retarded development.

Our interest, as teacher educators, is in better understanding the psycho/social dynamic played out in classrooms and that actively promotes literalness. Stated this way we assume that the dominant processes of schooling and training are innately conservative in the sense of promoting the status quo rather than change. In particular we believe that the pedagogic preoccupation with demonstrable behaviour and tangible outcomes, constrains cognition and restricts the development of alternative ways of knowing. Here we draw on Britzman's (2003a) work when she observes;

Can educators face the same sort of choice, between the empirical child made from the science of observation, behaviorism and experimental and cognitive psychology and the libidinal child who dreams yet still desires knowledge? The field’s dominant tendency is to choose the empirical child over the dream, the child the adult can know and control.
But in doing so, education has reduced the child to a trope of developmental stages, cognitive needs, multiple intelligence and behavioral objectives. And these wishes defend against a primary anxiety of adults: what if the dream of learning is other to the structures of education? (Britzman, 2003a, p. 53).

This statement is useful for two reasons. Firstly these themes resonate with Aronowitz and Giroux’s concerns about surface appearances and preoccupations. Secondly, by naming these matters as empirical processes, and linking them with pedagogic and curriculum developments, Britzman implicates wider educational issues. More specifically she begins to move our attention on to wider issues within the cultural politics of parenting, teaching and policy making. Understood as a single intellectual project, Britzman’s studies clearly places teacher education within the frame of critical analysis.

Taking a cue from Britzman we understand that if fresh insights about these accumulated experiences of schooling are to be developed, student teachers need to undertake a process of emotional and intellectual detachment. That is, for genuine change and growth to occur a sustained period of tension and challenge is required. If this does not happen, the everyday practices of lectures and tutorials, organized in traditional pedagogic patterns, act to reinforce entrenched knowledge and habituated practices with regard to teaching and learning. Accordingly we have designed experiences that facilitate dissonance and emotional and cognitive disturbance.

Our primary warrant for this approach is what we understand to be an urgent need for new forms of teacher education in a post September 11 world. Within such a context of increasingly complex global interaction, defined by violence and mistrust of difference, many former assumptions about education no longer hold. Parochial and ethnocentric curricula that promote separation and elitist outcomes are designed to create social division and competition. What is needed are new social and cultural practices designed to facilitate acceptance of difference and diversity and a capacity to find common ground. Here we employ, and reverse, an idea by Britzman (2003a) when she explores understanding the self through the learning of the other (p. 168). The aim of our work is a process of learning about the other through an understanding of the self. In the following sections of this paper we outline why we believe this approach is useful for moving beyond conceptual literalness and thus the perpetuation and reproduction of traditional pedagogic relations and practices.

**Sensing, perceiving, conceptualizing and abstracting**

According to William James, when a learner comes to understand an experience, that is, to make personal meaning from the encounter, there are three moments in the process – sensation, perception and conception. Stimuli or facts are initially sensed in one’s stream of consciousness. These initial sensations are not considered to contribute to any knowledge directly but provide the opportunity for one’s relation to them to be perceived. James’ perception refers to the learner’s recognition of an observed stimuli based upon one’s knowledge about the observed fact or stimulus. The level of knowledge about the fact is not very deep but is a simple recognition of one’s acquaintance with it. This is made possible by the third moment – conceptions – that one has arranged to understand the world the way it is. All three of these
moments are on a continuum and represent an increasing awareness of relations (James, 1890/1950, pp. 258-9) and so are not mutually exclusive of each other.

The role of concepts enable the individual to be more effectively engaged in the experiences of perceptions by developing an intention “to think of the same” (James, 1890/1950, p. 459). This is described by Dewey (1933/91, p. 128) as “an attitude of anticipation” where experiences are given meaning from an already existing unity of conceptualising or understanding of the world. This disposition to look for sameness led Dewey (1920/88, p. 83) to conclude that individuals “are governed by memory rather than thought”. Individuals who perceive entities in the environment make a claim (usually quite subconsciously) of knowledge about them based upon previous meanings given to similar experiences. It is only through concepts that meanings are able to be given to the ‘flow of life’. As Stevens (1974, p. 22) argues, “Without the pragmatic tool of conceptualization, it would be impossible to master the concreteness and fluidity of the world of perception.” The disposition to readily apply sameness is understood to be quite passive, with little active or abstract thinking being required.

It was claimed by Dewey that what is perceived then are not particular events or existences, but rather meanings. He argued (Dewey, 1933/91, p. 117) that all knowing “aims to grasp the meaning of objects and events” and that often these meanings originate from the already existing meanings deposited from prior experiences. As these meanings originate in one’s existing beliefs, thinking terminates, because stable meanings can be readily applied to the object presently being perceived. Therefore, to become educated and develop new beliefs or reconfigure current beliefs, Dewey argued that educative learning should not be the learning of things, but rather should be “the meanings of things” (Dewey, 1933/91, p. 176).

Dewey (1916/85, p 82) presents his technical definition of education as “that reconstruction or reorganization of experience which adds to the meaning of experience”. Elsewhere he argued that education is “a process of the renewal of the meanings of experience” (Dewey, 1933/91, p. 331). Central to this process of educative personal meaning-making was the method of thinking, a term which he often conflated with reflection, abstraction and philosophical thinking in particular. Dewey attacked the common maxim of his day for teachers to proceed from the concrete to the abstract. This was for two reasons. Firstly, any introduction of the concrete where abstract thinking was not encouraged cannot be educative. Such a procedure of presenting sense-perceptions without judgments opposes the educational process. Secondly, such an approach deludes the learner into assuming that the meaning of the object is in the object itself rather than in one’s relation with it.

In order to foster educative thinking that involves first-hand meaning-making, a certain distance is required from the immediate sensation in order to combine the abstract with the concrete. Dewey argued that it is mythical to assume that meanings are in the sensory experience alone. He argued that abstractive thought is indispensable if the meanings of experiences are to be reconstructed and applied to direct other experiences. Abstraction is considered a close kin to generalisation, and both require an adventure likened to “a leap from the known” into “the dark” (Dewey, 1916/85, p. 165; 1920/88, p. 166, emphasis added). Such an adventure is one that is
dynamic, and while full of possibilities has to also endure uncertainties. Dewey (1933/91, p. 13) argues that “Reflective thinking is always more or less troublesome because it involves overcoming the inertia that inclines one to accept suggestions at their face value: it involves willingness to endure a condition of mental unrest and disturbance.”

Abstract thinking has been described by Dewey as laborious and painful yet he maintained that its educative value is priceless because significant thought and a more worthwhile way of being is attained rather than the simple accumulation of superficial information. In order to transcend an impersonal relevance of a sensory meaning to something more significant, there needs to be a deeper engagement with the personal purpose present in making meaning. According to Dewey (1933/91, p. 198; 1920/88, p. 120), all thinking “contains a phase of originality” as the meanings of experiences are reshaped according to purposes. For a development or change of meaning to be educative, there is required a change in the quality of the learner’s mental disposition. Here existing concepts, which tend to give immediate meanings to sensory experiences, are themselves able to come under examination.

The traditional approach to education which Dewey opposed and which we argue is still the dominant approach today, is fostered via an Aristotelian type curriculum – one that is premised upon the notion “that only that which was already known could be learned” (Dewey, 1920/1988, p. 97). Learning is reduced to the sensation and perception of the literal. The methods of such a type of curriculum involve demonstration, argumentation, proof and even persuasion, designed to conquer the minds of learners. Learning in such an environment, according to Dewey (1933/91, p. 149), requires the intellectual virtues of passivity, docility and acquiescence. Pedagogical theory, according to Dewey (1916/85, pp. 176-9, 318), is brought into great disrepute if teacher educators attempt to hand out to teachers methods and models which are to be followed like recipes. Dewey went to great length to argue for an existential engagement that is required for significant learning. This is because persons base their actions upon their beliefs and so Dewey argued for the formation of intelligent personal beliefs rather than any accumulation of objective knowledge. He claimed that the world of thinking is inextricably interconnected with the existential character of the being who does the thinking. He (Dewey, 1929/58, p. 69) characterised this world of thinking as involving “uncertainty, ambiguity, alternatives, inquiring, search, selection [and] experimental reshaping of external conditions.”

However the conceptions (and therefore prejudices) that one already has, do not readily lend themselves to being examined because they are so familiar to the individual. Dewey therefore suggests that a shock be introduced; an unexpected sensation, designed to enable one’s attention to become alert and stretched. His justification for such an approach was that

[sensations] are stimuli to reflection and inference. As interruptions, they raise questions: What does this shock mean? What is happening? What is the matter? How is my relation to the environment disturbed? What should be done about it? How shall I alter my course of action to meet the change that has taken place in the surroundings? How shall I readjust my behavior in response? (Dewey, 1920/88, p. 131)
When the mind is engaged with a genuine perplexity, reflective inquiry is able to engage with confusion, doubt and uncertainty and explore various options, alternatives and possibilities. This is the essence of Dewey’s educative experience, where learning and crisis are understood to be interrelated.

In order for an experience to be educative, it must enable the learner to be liberated from being enslaved to attempting to acquire objective meanings located within sensory experiences alone. A critical distance allows learners to delay making judgments of meaning based solely upon immediate inclinations to perceive sameness. Abstraction allows one to break free from the particular and concrete in order to pursue other meanings in experiences. In order to promote the making of personally significant meanings in teacher education, the teacher educator cannot communicate pedagogical theory directly to the learners. This is why Dewey (1916/85, p. 23) claimed that “we never educate directly, but indirectly”.

The existentialist Søren Kierkegaard is one of the modern masters of indirect communication. While he is identified as a Christian writer, his means of indirect communication has been valued by some educators who see the value in his pedagogical style with educating beliefs more generally. Kierkegaard (1848/1998, p. 43) maintained that people in general are governed by illusions rather than by truth. He (Kierkegaard, 1848/1998, p. 43) claimed that “No illusion can never be removed directly, and basically only indirectly…. One who is under an illusion must be approached from behind.” He advised his readers not to be deceived by the word deceive. While it is often assumed that individuals can be deceived from a truth to an untruth, he argued that it could also occur that an individual can be approached indirectly from behind and be deceived into a truth from an untruth.

According to Kierkegaard, anxiety is experienced at the interface between the actual (literal, concrete and particular) and the possible (abstracted). It is argued here that there is educative value in provoking a certain level of anxiety in learners in order to enable them to participate more actively in significant meaning-making. Anxiety should not be viewed negatively. It needs to be understood as a healthy way of being – of having one’s horizons of understanding open to possibilities.

For educative change to be possible there is a movement from the actual present to the possible. In order for possibility to be an option, there needs to be plurality and multiplicity. Dewey suggested that from such a variety must come opposition and strife. He (Dewey, 1920/88, p. 141-2) argued that “Change is alteration, or ‘othering’ and this means diversity. Diversity means division, and division means two sides and their conflict. The world which is transient must be a world of discord, for in lacking stability it lacks the government of unity”. The implication for the teacher educator then, is to avoid representing a curriculum of unity and to rather replace it with one than consists in part of conflict. Consequently we argue that there should be an adoption of Britzman’s identification of the individual student-teacher as a site of dilemma and struggle, and provide for the possibility of educative change through anxiety and doubt.
Experiencing existential anxiety encourages a break from the tendency towards literalness as learners are thrown back upon themselves and become individualised. This individualisation is not a form of individualism, but is an enablement for individuals to become more fully and actively interconnected with others. It also brings to attention that meanings emerge from one’s personal conceptualizations and are not attributes of objective entities. Such awareness allows one’s understandings to be loosened from any grip of dogmatism to a more negotiable position that is always open for further abstraction and re-evaluation.

**Crocodile moments**

In 2004 the teaching team for the first year unit, Perspectives on Learning, EDF 1301, embarked on a graduated series of pedagogic interventions designed to facilitate students’ emotional and intellectual detachment from their habituated perspectives about learning. These interventions have come to be referred to as crocodile moments with reference to a story introduced in week two, involving a crocodile attack. These pedagogic interventions were designed to enable students to establish some distance from immediate meanings in order to examine and re-evaluate them by abstracting other possible conceptualisations. The following section of this paper outlines the different strategies that have been used.

The first pedagogic principle introduced in EDF 1301 was the use of selected movie scenes that dramatised different educational issues. A scene from *Dead Poets’ Society* was selected in order to facilitate a range of responses to a scene where a teacher challenges student passivity and their acceptance of the authority of a literary expert. In this scene the teacher, instructs the students to tear out the pages of their central text book and in so doing he asks his students to trust him and his judgement about the literary worth of the text. On the surface this strategy appears to be a radical intervention. On the other hand it can be understood as deeply conservative whereby all independent thought and action is subverted in the process of total trust given to a charismatic leader.

Following the screening of this scene the students were invited to answer the following questions: what is appealing/inviting about this scene?; how did you feel about it?; what is challenging and or confronting about the scene?; what do you think about this scene?; what is contradictory about the issues presented?; what are your reactions to this scene telling you about your own thinking?

In the second week of classes the students were read a short story titled *HOW IT FEELS . . . To be taken by a croc* (Hamer, 2004). The story is about Val Plumwood who is attacked by a crocodile, taken on three death rolls, almost killed and, with the help of a park ranger, lives to tell about this chain of events. This near death experience turns out to be a life turning point in which many former assumptions about such issues as the meaning of life, death and ideas about food and eating are questioned and reconsidered.

Introducing the pedagogic theme of metaphor we explained to the students of EDF 1301 that during the unit, the course team would introduce crocodile moments and
associated ranger assistance. The aim of the crocodile moments was to provide experiences designed to challenge and unsettle personal assumptions about learning and teaching. Ranger assistance was designed to provide time to debrief and critically evaluate personal reactions to the crocodile moments.

In week three during a lecture presentation, by a course team member, another staff member stood up to interject and propose an alternative perspective. As a result of the ensuing debate some of the propositions stated in the official lecture notes were modified. After this exchange the students were invited to think about the contingent nature of knowledge and the role of negotiation and communication in a creative teaching/learning process. In subsequent workshops students were given the opportunity to share their ideas and reactions about this event in order to clarify their own perspectives about appropriate forms of teaching and student behavior and interactions.

During week five the standard lecture/workshop format was changed in order to offer experiences on a ropes course. This experience was designed to provide a physical challenge, and an experience of working as a team with their new peers under the supervision and guidance of more senior, third year students. In brief this was an experience involving challenge by choice and the enactment of active trust of one’s peers and staff. Throughout this event students were encouraged to verbalise their thoughts and reactions to the challenges that they were experiencing.

Through use of the lecture/workshop format students were provided with sensory experiences and the opportunity to verbalise and articulate their responses to these stimuli and then through the use of discussion, debate and access to pertinent literature to form conceptualizations about these experiences. In employing this pedagogic approach we placed maximum emphasis on the process of communication and in particular the work of Mackay with his emphasis on communication and meaning making. Here we drew on two axioms offered by Mackay

...communication occurs when the audience does something with the message … the real power is not in the message, but in the listener. The listener has the power to interpret the message and, in communication terms, that’s the ultimate power. (Mackay, 1998, p. 25)

Mackay’s work proceeds from a critique of traditional and dominant models of communication that rely on an act of faith in power of a speaker’s message. Logically this gives maximum importance to the role of a teacher using a traditional transmission model of pedagogy. Mackay inverts this logic with his second axiom where he focuses on the meaning making of the listener. Here he employs the metaphor of a communication cage as way of describing the cognitive structure used by an individual to sift, sort, accept and reject outside messages.

With this as our focus we turned the spotlight onto the students and invited, provoked and cajoled them into documenting and sharing their own understandings about the process of learning. In doing this we were attempting to reach across the three levels of James’ model and therefore to synthesise sensation, perception and conception. At this early stage in our program we do not have hard evidence about the impact of this approach although the following anecdotal responses from a workshop activity, at the
end of week six, provide some clues about what meaning making has occurred. Students articulated their developing perspectives with the following descriptors:

Learners are different from each other; The injection method is not effective- this was a huge insight, a few words in Mackay changed my whole perspective; Cages are constructed as barriers and for security; Transference of feelings occurs between teachers and students; Learners construct their own perspectives and develop ‘scaffolds’ as supports; Learning involves anxiety; Personal perspectives keep changing; Learning occurs through (active) listening; Knowledge is acquired by different means; visual, auditory and kinaesthetic.; Learning involves changing behaviour; Learning involves self understanding; Assessment is a powerful way of shaping learning and learners; Learning involves challenge and challenge creates learning; Learning involves communication; Vygotsky suggests learning involves a wide perceptual vista; Learning is subjective and is susceptible to change; The ropes course tells that learning involves team work; On any given Monday a wide variety of experiences and reactions will occur in ‘the classroom; Learning involves trust; I now have the confidence to ask ‘why’?

Concluding remarks

In developing our argument we recognize the need to be able to demonstrate the practical implications of our (re) thinking. To this end we have provided a schematic overview of some of the strategies that we have employed in an undergraduate unit. Here we have used a process of unsettling moments designed to provoke emotional and intellectual detachment in order to make space for conceptualization. We take this to be a sign that a new form of education is needed and if that is the case a new form of teacher education becomes part of the reform process.

We understand the stakes of this form of pedagogy to be very high. In the post September 11 world there is ample evidence of break downs of communication, consensus and civility. All around there are signs of anxiety, uncertainty and confusion. In an increasingly cosmopolitan and integrated world effective communication and genuine dialogue are of premium importance. Here we take a clue from Anthony Giddens (1994) and his concept of dialogic democracy. This he explains as;

…dialogue in a public space provides a means of along with the other in a relation of mutual tolerance- whether that ‘other’ be an individual or a global community of religious believers.

Dialogic democracy therefore stands in opposition to fundamentalisms of all types.

(Giddens, 1994, p. 115)

Our aim is to develop a form of teacher education that can claim to be genuinely part of this dialogic process.

References