

Improvisation-based Pedagogies

Changing Thoughts on Learning

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DESPITE THE PROLIFERATION of curricular designs that emphasize discovery and collaborative learning, test standardization has come to dictate text selection. As a result, in order to ensure the successful reproduction of answers to these tests, classroom interaction focuses upon the internalization of pre-scripted lesson plans, created in complete ignorance of the subjectivities and aptitudes of actual learners. This paper problematizes the value accorded these scripts, especially as they limit more creative and dialogic forms of engagement in the classroom. I present improvisation as a concept-metaphor to argue that curricula must be partially indeterminate if they are to take into account learners' subjectivities and interpretations. I begin by drawing upon critiques by educational theorists Maxine Greene (1988) and John Dewey (1916/1966, 1900/1990) to question the value of curricular designs that do not sufficiently address transactional complexities of learning and fail to recognize the role of the imagination in fostering subjective interpretations. I discuss the inadequacies of technocratic forms of instruction and then contrast them with possibilities inherent in improvisation-based approaches by fostering an awareness of context-dependency in knowledge construction and use. I argue that open-ended curricula, which integrate both information gaps and minimally specified, generative constraints, better promote creative thought, critical thinking, and student engagement. These claims are strengthened when tied to several strands of philosophical thought – Isocrate's notion of *kairos*, or timeliness, Aristotle's notion of *phronesis*, or pragmatic knowledge, and Bergson's notion of *durée* – and educational theory – Whitehead's disdain for inert ideas and Dewey's transactional view on learning. These thinkers argued that knowledge cannot be considered without referring in part to the contexts in which knowers are embedded, views which anticipated relationships and dynamics central to modern conceptions of science. I trace these parallels between science and improvisation, and detail ways in which they share common dynamics and orientations toward emergence, relationship, and interdependency.

I make the claim that improvisation fosters an awareness of these transactional understandings as well as develops an array of cognitive and social skills. I draw upon two areas of improvisational practice, jazz and drama improvisation, to investigate ways in which these modes of performance provide insight into educational praxis. Jazz, which uses under-

determined structures as vehicles for individual expression and group interaction, is a rich analogy for classroom collaboration. It both embodies the theoretical principles discussed and provides a framework for practical application in curricular development. To conclude, I turn to process drama as an example of a pedagogical model for improvisation. This alternative approach, already represented in educational practice and literature, grounds the understandings derived from jazz in an approach that practitioners may integrate with pre-existing curricular goals. These two forms of improvisation offer generative models for a re-structuring of classroom participation.

Mis-education and Pre-scripted Objectives

Many of the conclusions I draw about improvisation contrast sharply with the trends I find gathering momentum in public schools. My experiences teaching ESL in both elementary school and university coincide with the current state of education described by Maxine Greene (1988), in which:

teachers and administrators are helped to see themselves as functionaries in an instrumental system geared to turning out products, some (but not all) of which will meet standards of quality control. They still find schools infused with a management orientation, acceding to market measures; and they (seeing no alternatives) are wont to narrow and technicize the area of their concerns. (p. 13)

These market-driven expectations translate into a similar framing of student growth, as a series of incremental steps toward definable goals mapped out in advance, in the absence of any individual.

Classroom behavior and individual experience and personality are considered of secondary importance, if at all, to the sequential logic of the pre-formed curriculum and its subsequent implementation: “The dominant watchwords remain ‘effectiveness,’ ‘proficiency,’ ‘efficiency,’ and an ill-defined, one-dimensional ‘excellence’” (ibid., p. 12). Their subjective experience marginalized, their intellectual and emotional responses valued insofar as they complement the set curriculum, “students are urged to attend to what is ‘given’ in the outside world – whether in the form of ‘high technology’ or the information presumably required for what is called ‘cultural literacy’” (ibid., p. 7). Representing knowledge to students in this fashion fosters “unreflective consumerism,” “a preoccupation with *having* more than *being*,” and an orientation toward the material constraints of their lives as a “more an objective ‘reality,’ impervious to individual interpretation” (ibid., p. 7). Aesthetic sensibilities are similarly presented as a property of sets of facts and competencies about art:

Exploration in the domains of the arts are seldom allowed to disrupt or defamiliarize what is taken for granted as “natural” and “normal.” Instead, the arts are either linked entirely to the life of the senses or the emotions, or they are subsumed under rubrics like “literacy.” (Greene, 1988, p. 13)

Education reified as the reproduction of the “tried and true” desensitizes students to alternative forms of understanding and minimizes opportunities for students to respond critically to diverse

perspectives. Instead, students are compelled to provide answers that can be easily mapped out on computer bubble-sheets.

Dewey (1916/1966) sees these conditions, where “growth is regarded as *having* an end, instead of *being* an end” (p. 50, italics in original), as constituting mis-education, a problem that may be attributed to three causes:

first, failure to take account of the instinctive or native powers of the young; secondly, failure to develop initiative in coping with novel situations; thirdly, an undue emphasis upon drill and other devices which secure automatic skill at the expense of personal perception. (p. 50)

Fully elaborated, technocratically determined goals and objectives defining the end-state of the individual learning run counter to the innate capacities of the child and conspire to arrest continued growth.

The present work positions itself in this straitened academic context, seeking more open-ended, indeterminate spaces for student engagement and discovery. It problematizes the implicit claims made by a curricular design that does not allow learners to actively direct their learning and questions the value of a system that mutes dissent and favors complicity to more complex notions of alterity. It is my contention that a curriculum incorporating improvisation validates the lived experiences of the participants, thereby countering some of these disempowering practices and beliefs.

Improvisation

In spite of our efforts to make life more predictable, as organisms we are constantly faced with uncertainty and are thus intimately familiar with improvisation. The term “improvisation” carries with it nuances less neutral than the related term “adaptation,” which implies responses to environmental pressures. Outside of specified artistic contexts, improvisatory acts are regarded as makeshift or happenstance, as situations that could have been accomplished more effectively had there been more time, preparation, or forethought. That is to say they are not situations that are sought out, but responses to problems that arise suddenly, that catch us unawares.

Within artistic contexts, however, improvisation has very different connotations. Instead of the default position common to situations referred to by the synonyms above, in which agents’ acts are prescribed by the time, knowledge, or resources they ostensibly lack, improvisation offers artists liberating forms of engagement and dynamic opportunities for peak experiences of creative expression. Somewhat surprisingly, improvisers prefer not to know what they are going to do next, or, if that seems to be an overstatement, defer from complete commitment beforehand.

There are general characteristics to improvisation, commonalities that are to be found in the various forms of expression. It is found to display the following features: it is context-dependent, emergent, indeterminate, dialogic, and collaborative. These characteristic elements, present in varying degrees in all forms of improvisation, contrast sharply with standardized models for classroom instruction that ordain pre-determined objectives. Improvisers exercise their freedom in the ways they admit to the constraints commonly accepted for their idiom and play with variations within those constraints, or more freely reference those constraints by contravening or

flouting them. Improvisation is seen as “an aesthetic which seeks to reconcile an apparent contradiction: how to bring spontaneity and restraint into balance” (Soules, 2000). I argue that this condition parallels the orientation of the learner to class content. Learners may be creatively enabled by curricular content that is presented not as a catalogue of facts but as hypothetical suppositions that are constrained yet indeterminate. These curricula are kept open by posing gaps for interpretation, whereby students actively direct their learning by reframing materials to critically analyze possibilities. As a result, the creative freedom granted learners to explore the material is the freedom to recreate themselves through their learning. In improvisatory performances, this collective enactment of freedom is often expressed as an awareness of mutual responsibility. Group improvisation is marked by a sense of interdependency and care. These characteristic elements of improvisation suggest possibilities for more collaborative and engaged classroom environments, spaces in which learning is constructed as creative, interactive, and expressive.

Philosophical grounds

Time is invention or it is nothing at all. (Bergson, 2005, p. 282)

Kairos

Improvisation involves more than an explication of subject matter, more than an analytical description of the subject’s logical sequencing of constituent parts. We can clarify a key feature of improvisation by referring to two Greek terms for time, *chronos* and *kairos*. These essentially different concepts of temporal progression were seen by the Greeks to be mutually interdependent. John E. Smith (1986/2002) describes *chronos* as “the fundamental conception of time as measure, the *quantity* of duration, the length of periodicity, the age of an object or artifact, and the rate of acceleration of bodies, whether on the earth or in the firmament beyond” (p. 47, italics in original). *Chronos* is the uniform time that was later assumed in Newtonian physics, the steady ticking of God’s watch. The complementary view of time, *kairos*, “points to a *qualitative* character of time”; this is the perception that “something appropriately happens that cannot happen just at ‘any time,’ but only at *that* time, to a time that marks an opportunity which may not recur” (ibid., p. 47). *Kairos* is what educators like to call the “teachable moment,” for it entails an awareness of an event’s “significance and purpose and to the idea that there are constellations of events pregnant with a possibility (or possibilities) not to be met with at other times and under different circumstances” (ibid.). This begs the question: what else happens in school besides “teachable moments”? A reasonable answer: the inexorable delivery of pre-scripted curricula. Smith (1986/2002) suggests that:

the *chronos* aspect [by itself] does not suffice for understanding either specifically historical interpretations or those processes of nature and human experience where the *chronos* aspect reaches certain *critical points* at which a qualitative character begins to emerge, and when the junctures of opportunity calling for human ingenuity in apprehending when the time is “right.” (p. 48, italics in original)

Phillip Sipiora (1986/2002) traces the usage of *kairos* from Homer’s *Iliad* to Hesiod’s *Works and Days*, in which it took on the sense of “‘due measure’ or ‘proper proportion’” (p. 2). Sipiora

provides numerous examples to support the claim that “*kairos* was the cornerstone of rhetoric in the Golden Age of Greece” (p. 3). The Romans continued to embed an awareness of *kairos* in a rhetorical pedagogy that fostered the art of speaking extemporaneously. In the *Institutio Oratoria*, published at the end of the first century A.D. and called “a landmark in the history of Roman education,” (Gwynn, 1926, p. 242), the rhetorician Quintilian wrote: “But the richest fruit of all our study, and the most ample recompense for the extent of our labor, is the faculty of speaking extempore” (Murphy, 1987, p.154), a skill one needed to cultivate, because “promptitude in speaking, which depends on activity of thought, can be retained only by exercise” (p. 156).

Isocrates concept of *kairos* expanded on this idea of appropriate action – mastery was not only a set of skills but also the ability to determine which skills to effectively employ at a given time (Tsang, 2007, p. 687). This characterizes a “shift to discernment” (Noel 1999, p. 280), or a “matching of actions to particular contexts” (ibid., p. 282), a concept that Aristotle later developed in his work on phronesis.

Phronesis

Phronesis involves the wisdom to recognize and utilize knowledge appropriate to the unfolding context in which it is employed. This practical wisdom is to be distinguished from Aristotle’s four other virtues of thought, each of which has been translated in numerous ways: *technê*, *epistêmê*, *sophia*, and *nous*. *Phronesis*, or “practical reasoning” (Noel, 1999, p. 273) is knowledge of things that admit of change, knowledge that is deployed in negotiating life’s contingencies. *Phronesis* was Aristotle’s way of explaining common reasoning, what Coulter and Wiens (2002) describe as “embodied judgment linking knowledge, virtue, and reason” (p. 15). Clearly, not all thoughts and actions are formulated syllogistically; the individual is neither driven solely by logical, abstract truths nor by force of habit, for neither of these understandings of the world takes into account specific details and contexts. Our thought is often more closely tied to demands of the indeterminate present. As Eliot Eisner (2002) puts it:

Practical reasoning is deliberative, it takes into account local circumstances, it weighs tradeoffs, it is riddled with uncertainties, it depends upon judgment, profits from wisdom, addresses particulars, it deals with contingencies, is iterative and shifts aims in process when necessary. (p. 375)

Eisner sees *phronesis* as a fundamental aspect of aesthetic consciousness. He is not solely interested in the creation of works of art, *per se*, but is concerned with artistry, more generally, in teaching (and here I would add that these are basic sensitivities we hope to foster in students). He writes: “Teaching profits from – no, requires at its best – artistry. Artistry requires sensibility, imagination, technique, and the ability to make judgments about the feel and significance of the particular” (ibid., p. 382).

It is this (qualitative) awareness of knowledge as tied to a particular context that marks *phronesis* as distinct from other forms of knowledge that allow for greater abstraction. For Aristotle, the attention to the circumstances in which such knowledge was embedded carried ethical implications:

Phronesis is a kind of morally pervaded practical wisdom. It is acquired by a *phronimos*, a practically wise person, through experience. But experience takes time. *Phronesis* could

not be taught like geometry. It did not submit to didactic procedures. (Eisner, 2002, p. 381)

This form of knowledge was not simply declarative; it was seen as a constitutive element in the social encounter, one embedded in the social context and shaped by its unfolding. This raises an important question: “If *phronesis* cannot be taught explicitly, how is it secured? A part of the answer is through deliberation with others” (ibid., p. 382).

Halverson (2004) offers a description of *phronesis* that resonates with the dynamics central to group improvisation: it is “experiential knowledge, developed through habitual practice over time, lodged in individual character and used to determine intentional action” (p. 92). *Phronesis* is a praxis that students may become more skillful in deploying, one gained through the conscious attempt to engage with the complex particulars, conceptual and moral, that characterize the negotiation and learning of practical knowledge.

I argue that improvisation is this very practice. If students perceive the contents of textbooks as concretized paths they must duly follow, they are likely to become less sensitive to the positionality of the authors and thereby less capable of seeing alternative perspectives. Critical thinking skills are obviously at odds with this kind of blind faith in abstracted bits of knowledge; students must instead be helped to develop “the capacity for making sound judgments in varying circumstances, [and] must be keenly aware of that which is particular, contingent and fluctuating” (Stern, 1997). That is, they must recognize the central role interpretation plays in the construction and reification of knowledge. Nietzsche addresses this matter-of-factly in an oft-quoted section from *The Will to Power* (1968):

Against positivism, which halts at phenomena – ‘There are only *facts*’ – I would say: No, facts is precisely what there is not, only interpretations. (...) In so far as the word “knowledge” has any meaning, the world is knowable; but it is *interpretable* otherwise, it has no meaning behind it, but countless meanings. – “Perspectivism” (p. 267, italics in original)

The philosopher whose work most fully takes up these concerns in an educational context is John Dewey. Dewey saw learning as transactional in each of these contexts: in *The School and Society and The Child and the Curriculum* (1900/1990), and in his formulation of the Laboratory School, he promoted forms of learning that could not be reduced to the simple transmission of skills, but rather that shaped and were shaped by the complexity of student experience outside of class; in *Democracy and Education* (1916/1966) he argued that democratic models for school interaction are based upon the free expression of ideas offered up for critical analysis, and in *Art as Experience* (1934/2005), he argued that the work of art, as both object and stimulus, invites a uniquely coherent form of experiential understanding. These transactional views closely parallel the orientation of improvisers towards their co-collaborators and the work as it unfolds. Jazz improvisers are committed not only to achieving instrumental virtuosity but also, more importantly, to having their music speak for their lived experiences. The emergent nature of jazz, in which the dynamic interaction of musicians is centered upon the creation of a mutually determined and critically negotiated piece of music, represents individual and group expressive ends, a process that has been seen as a paradigm of democratic action. It is within this context that jazz artists seek to communicate the (re)creation of one’s self as a process of unfolding aesthetic awareness.

Alfred North Whitehead shared Dewey's concern for education primarily seen as the replication of information divorced from the needs specific to learners. The objections he raises in *The Aims of Education* (1929) are concerned with the trend in schools to consider education as the instruction of information that has not resulted from self-discovery on the part of the learner. Whitehead (1929) harshly condemns the teaching of such "inert" knowledge, appealing instead to the immediacy of experience: "The understanding which we want is an understanding of an insistent present. The only use of a knowledge of the past is to equip us for the present" (p. 14). This is, in essence, the most basic understanding of improvisation, as an orientation toward knowledge as embodiment and enactment.

An improvisation-based approach is in harmony with Dewey's pragmatic, aesthetic and democratic understandings. Improvisation not only parallels Dewey's integrated approach to education – what is widely known as "learning by doing" – but it also fits equally well with his democratic and experiential understanding of social engagement.

The Direct Apprehension of Time

Another philosopher whose thoughts inform this work is Henri Bergson, particularly as these ideas are set forth in his book *Creative Evolution*, first published in 1907. I believe that the emphasis that education places on quantifiable outcomes is profoundly at odds with self-knowledge and the direct, intuitive forms of apprehension that Bergson describes in terms of *durée*, time that has not been spatially conceptualized.

A direct apprehension of Time, as Bergson conceives of it, is problematic for learning theories that do not allow students to sense the flow of their learning in processual, developmental terms. This form of understanding requires a qualitatively different perspective. He writes: "In order to advance with the moving reality, you must replace yourself within it. Install yourself within change, and you will grasp itself and the successive states in which *it might* at any instant be immobilized" (Bergson, 1907/2005, p. 253-254, italics in original). The organic, evolutionary processes that direct life must be understood as a part of a greater unity, a worldview for which the "*theory of knowledge and theory of life seem to us inseparable*" (ibid, p. xxii, italics in original). This is a perspective that Gregory Bateson (1979) also embraced, using the term the "pattern that connects," a relation that he saw as existing between the conscious and particulate aspects of the world.

Pete A.Y. Gunter (2005), in his introduction to *Creative Evolution*, offers a summary of Bergson's philosophical agenda that captures the essential nature of improvisational practice: "evolution is, literally, creative: making itself almost experimentally on diverging branches, purposive insofar as it has a direction (toward greater flexibility, spontaneity, awareness), [and] purposeless in that its goals are not pre-established and have to be achieved in transit" (Gunter in Bergson 2005, p. xi). He writes that the task of Bergson's text is, "to introduce a real, dynamic temporality into the study of life" (ibid., p. ix).

Bergson was developing his philosophy notion of *durée* precisely at the time Einstein's theories of relativity were revolutionizing not only physics but also commonsensical understandings of space and time as well. The idea that perception was relative to the observer in even these most fundamental terms was a serious blow to positivistic theories of knowledge, and precipitated a completely new reformulation of scientific suppositions previously considered axiomatic. Bergson (1907/2005) saw an understanding of *durée* as concordant with these developments in science, stating, "*modern science must be defined pre-eminently by its aspiration to take time as an independent variable*" (p. 277, italics in original).

Modern Science

The dynamics inherent in improvisation resonate with conceptual frameworks and principles in current models of science. These views are commonplace across disciplines, and constitute a shift from the definition of isolatable “things” to a focus on relationships and interactions.

Steven Goldman (2004), a philosopher of science, technology, and society, identifies six themes that are central to the scientific developments in the twentieth century (Figure 1). The forms of engagement implicit in the improvisatory approach I am commending parallel the scientific moves mentioned below.

	In 20 th century science:	Improvisation:
1.	relationships are increasingly perceived to be the ultimate reality, with natural phenomena seen as systems	foregrounds relationship, as it is integrally grounded in the context from which it grows
2.	dynamism - accepting change as normal and not trying to reduce it to stasis, with a concomitant focus on non-equilibrium systems, which reveal nature to be self-organizing	eschews the security of stasis for flux, in which emergent phenomena are shaped and organized
3.	information as a feature of reality	is constructed via the dialogic exchange of information
4.	the emergence of complexity out of simplicity	yields high degrees of complexity derived from minimal, simple constraints
5.	the recognition of subjectivity and objectivity as co-defining	recognizes the interdependent mutability of both performer and content
6.	science was increasingly seen as cross-disciplinary and collaborative ventures	involves a collective exploration of borders and conventional assumption

Figure 1 – Parallels between the development of science in the 20th century and improvisation

While artists and musicians were quick to adopt and interpret the alternative worldviews offered by science in the twentieth century, educational practice has by and large maintained a more conservative stance. The theoretical centrality of indeterminacy in current scientific views is entirely concordant with the emergent, processual nature of improvisation I offer.

Recent work in cognitive science reflects the impact these shifts have had in the study of the human mind. Varela, et al. (1999) seek to bridge the Cartesian gap between cognition and embodiment by drawing upon Buddhist philosophy, which sees reflection as a basic aspect of experience. The theory of enactivism they articulate offers a holistic understanding of embodied cognition, one that is “not the representation of a pregiven world by a pregiven mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that being in the world performs” (ibid., p. 9). The enactive perspective regards commonsense knowledge, or phronesis, as “difficult, perhaps impossible, to package into explicit, propositional knowledge,” a form of understanding which seem to be more a matter of “knowing how” rather than “knowing that” (ibid., p. 148). We gain this knowledge by reflecting upon accumulated experience instead of referring to abstract rules. Varela, et al. claim that in order to account for such commonsense knowledge, “we must invert the representationist attitude by treating context-dependent know-how not as a residual artifact that can be progressively eliminated by the

discovery of more sophisticated rules but as, in fact, the very essence of *creative cognition*” (ibid., p. 148, italics in original).

Jazz

Jazz, which has been recognized as a provocative metaphor in knowledge management (Barrett, 1998; Weick, 1998), provides a fertile concept-metaphor for classroom interaction. Improvisation presents a frame for adaptation to change, a means for discussing the dynamic conditions that individuals and organizations face when confronted with new information. Improvisation in jazz is characterized by distinct dialogical qualities that highlight the following perspectives: a view of learning as on-going process, a heightened awareness of the immediacy of knowledge construction, engagement in feedback and critique in real time, the creative exploration of constraints with rules seen as generative possibilities, and the foregrounding of interpersonal relationships in collaborative sense-making. Many features of jazz interplay suggest similar classroom praxes. These include the adoption of open-ended curricular elements with an emphasis on divergent production, a shift to question-making as a means of provoking inquiry and response, a view of mistakes as prompts for dialogue, and the rotation of leadership roles in the classroom to facilitate the expression of individual interpretation.

Process Drama

These general considerations of jazz provide the context for the exigencies particular to theatre improvisation. Frost and Yarrow’s brilliant work *Improvisation in Drama* (2007) presents a variety of theoretical perspectives supporting a powerful model for classroom interaction. Frost and Yarrow (2007) state that, in improvisation:

everything has to do with the enriching of performance: whether this is seen as individual realization of action, expression and response; as a communal act of composition; as something shared with an audience; or as a celebration of the full resources of individual being and the ways they can be combined to create new patterns of significance. (p. 183)

A class utilizing improvisation as a mode of exploring material will necessarily look different than one seeking the reproduction and internalization of pre-scripted curricular objectives. I would now like to link improvisation with classroom practice using an existing method, process drama, to underscore benefits I believe applicable in the teaching of other content areas.

Process drama has its roots in the pioneering work of Dorothy Heathcote, who was appointed in 1950 to Newcastle-upon-Tyne University, in the Institute of Education. Heathcote’s name for her approach was “The Mantle of the Expert” (Heathcote & Bolton, 1995, Wagner, 1976/1985). This approach, under the name of process drama, has more recently received a wider audience through the work of Cecily O’Neill. These forms present one feature that distinguishes them from other drama approaches. During improvisation in process drama, the teacher moves in and out of role to facilitate dramatic movement and coordinate content exploration. Students remain in role throughout, and the drama unfolds with the teacher guiding it primarily from the inside. The teacher, whose direction helps shape student interest and input to explore general goals, is no longer the gatekeeper to knowledge but guide and collaborator. In this way, all involved are co-creators in the improvisation. In “The Mantle of the Expert,” skilled teachers support “a situation where students are making the most of the decisions and neither [the teacher] nor the class knows what will happen next” (Wagner, 1976/1985, p. 25). This indeterminacy does not

lead to a state where anything goes, where decontextualized personal expression is lauded; instead, Heathcote is attuned to the need for maintaining the dramatic focus on the narrative.

In contrast to approaches that frame education as the convergent reproduction of pre-scripted, de-contextualized knowledge, Johnson and O'Neill (2001) consider the learner's subjective engagement in and appreciation of the process: "the *'end-product'* of improvisation is the *experience* of it" (p.144). They speak of improvisation in process drama in positive terms that parallel the scientific method: "discovering by trial, error and testing; using available materials with respect for their nature, and being guided by this appreciation of their potential" (p. 44).

Process drama teachers provoke the exploration of content by initiating what O'Neill (1995) calls "pre-texts" (p. xv), dramatic conflicts which structure the unfolding improvisation while simultaneously constraining the topic to meet general pedagogical aims and generatively prompting players to seek problems and find their own solutions. Interactions within this loosely circumscribed area, both between students and between students and teacher, are not defined in advance. Roles are assigned to empower and challenge learners and to create supportive inclusive contexts that heighten engagement. These minimal structuring constraints make process drama a dynamic, flexible approach that allows the teacher to differentiate instruction as opportunities present themselves, and offers meaningful learning contexts in which students can develop their powers of expression, negotiation, and critical thinking.

The student-directed aspects of the improvisation-based approaches discussed here share a constructivist orientation: learning is an act not only of knowledge construction but also one of *autopoiesis*, or self-creation. As in other artistic endeavors, the act of creating transforms the creators, whose own possibilities are actualized as they respond to the unpredictable turns their works take as they unfold. This point was well summarized by Foucault (1997), who asked, "Why should a painter work if he is not transformed by his own painting?" (p. 131). It is equally true of learning that has qualitative and aesthetic dimensions. Improvisation encourages students to experience such learning – in which they internalize, interpret, and imbue information with personal significance – as transformative.

In summary, process drama offers an open-ended framework for learning through enactment, a pedagogical approach that embodies many of the social and cognitive benefits experienced by jazz improvisers. Improvisation-based approaches embrace the indeterminate, unscriptable interactions of collaborative knowledge construction as dynamic opportunities to create.

Conclusion

This paper argued that the adoption of standards is in many ways contrary to a notion of student directed learning. The imposition of pre-determined standards not only minimizes opportunities for dialogic interaction but also insufficiently capitalizes upon the strengths of constructivist teaching. Improvisation-based approaches differ significantly from top-down curricular implementation by purposefully using gaps and constraints to provoke student interaction. Instead of presupposing convergent responses as the sole indicator of mastery, improvisation offers a context for students to express their own perspectives upon the content under discussion, much as jazz improvisers provide their individual interpretations of the tunes they are exploring. The role of the teacher shifts toward one of facilitation, empowering learners to increase their involvement and heighten interplay in the unfolding of class content. In contrast to direct instruction, improvisation-based structures heighten engagement, invite distinctive

forms of cognitive, aesthetic, and democratic participation, and grant greater access to student subjectivities.

I propose the following questions for further research: How do interdisciplinary perspectives on improvisation help us reframe issues such as collaboration, knowledge construction, and democratic participation? What alternative forms of engagement grow out of a consideration of improvisation as a transformative process? What implications do improvisation-based forms of classroom interaction have for assessment? My final reflections concern the inherent risk of improvisation. Why does teaching improvisation need to be justified? What are the resistances and obstacles to the adoption of improvisation based methods? A deeper understanding of these issues will better help us enhance learning and foster individual expression.

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