CHAPTER TWO

Authorial Teaching and Learning

EUGENE MATUSOV, UNIVERSITY OF DELAWARE

In memory of Sigrun Gudmundsdottir[1]

> Teaching is first of all not a question of methods or techniques, but of personality, last-ing influence is personal radiation . . . Josef Albers, January 9, 1940. (Cited in, Reardon & Mollin, 2009, p. 7)

Playwright William Shakespeare came up to his desk, picked up his feather pen, dropped it in an inkwell, and wrote, "Performance Objective: By the end of this play, the audience will experience catharsis of love without borders, will pour tears about killed young lovers, and will shame meaningless family feuds. The Kingdom Reign Performance Standards: 3.1.2 promoting catharsis, 4.7 apprecia-tion of love, and 2.5.1 critique of antisocial behavior." This is how the genius Shakespeare started his famous masterpiece *Romeo and Juliet*.

Reader, you would be shocked and laugh in disbelief! But this is how many department of education officials, school administrators, and education professors in the United States recommend and even demand that pre- and in-service teach-ers start writing their lesson plans (for examples of such "by the end of the lesson" recommendations, see http://www.teaching-esl-to-adults.com/best-esl-lesson-plans.html or just Google this phrase). Some readers might object my critical sar-casm of performance standards in education that teaching is not like playwriting: It has well-defined educational objectives, teacher accountability, instructional

strategies, state-defined curriculum, and so on and so forth. These readers might argue that teaching is more like technology, more like science, or even more like good medical practice, where, like a medical disease, a particular lack of understanding or skill in a student is diagnosed through careful diagnostic testing and then addressed through the teacher's smart, precise instruction. Like in medicine, the best instructional practices and technologies have to be based on educational standards grounded in solid research evidence established in labs and *in vivo* (for more discussion on this, see Hammersley, 1997; Hargreaves, 1996, 1997; Matusov, 2010b). But I disagree with these readers, and this chapter is dedicated to building my argument against that view.

In this widespread *technological* approach to education, learning is viewed as transmission, acquisition, discovery, or even (co-)construction of self-contained, standalone knowledge, skills, attitudes, and dispositions that can exist by themselves, outside of particular people and circumstances. People are viewed as mutually replaceable with regard to knowledge, skills, dispositions, attitudes, and so on. For example, the knowledge of 2+2=4 is assumed to be independent of people who "have this knowledge" and why they do (i.e., knowledge is viewed as "a thing to have"). The knowledge of 2+2=4 is assumed to exist in the same way for everybody who "possesses it." It is objective and independent of human subjectivity—human desire, values, goals, feelings, relations, questions, doubts, laughter, seriousness, and so on. The knowledge exists "out there" twice: first in the natural world itself and then discovered and stored by people. The body of knowledge exists by itself outside of people—locked in library books, manuals, instructions, guidelines, textbooks, charts, teaching instructions, school curricula, and, of course, nowadays, on the Internet, as "immutable mobiles" (Latour, 1987, p. 229). In education, students have to receive, acquire, discover, or reconstruct preexisting knowledge that humanity has reliably worked out. Although the proponents of a technological approach to education may admit that people can use self-contained, standalone knowledge, skills, attitudes, and dispositions differently (usually in the students' remote future), they insist that the minimum competence promoted by education equalizes and homogenizes all of them.

According to this technological approach, learning is viewed as acquisition of pre- and well-defined, self-contained, decontextualized knowledge, skills, dispositions, and attitudes, constituting *pre-set curricular endpoints of teaching* (Matusov, 2009). Viewing students' learning as acquisition of the curricular endpoints preset by the teacher promotes a technological approach to teaching as a combination of well-defined and self-sustained unilateral techniques, strategies, and methods that can effectively guarantee such acquisition (or transmission, or discovery, or co-construction). Technological approaches can be diverse: They can involve *instruc-*

tionism when the teacher envisions one well-defined pathway for all students toward the preset curricular endpoint, or *constructivism* when the teacher envisions potentially limitless, ill-defined, negotiated pathways toward the curricular endpoint they have preset. To ensure the efficiency and accountability of this technological teaching, usually (1) the curricular standards are designed by the state educational agencies, (2) high-stakes testing is administered to all students in some regular periods to reveal their educational deficits and achievements (i.e., lack of deficits), and (3) educational research of teaching efficiency examines teaching technology following a medical model—when educational deficit is diagnosed through testing, treated with a calibrated instruction, and then the student is retested for an outcome—which is based on randomized samples and double-blind control and treatment groups i.e., so-called "research-based teaching" (Hargreaves, 1996).

Educators inspired by the technological approach often want to empower their students by equipping them with a powerful toolkit of socially important knowledge, skills, attitudes, and values that would open limitless possibilities for the students in their future. However, these educators seem to forget that what makes a tool a tool is individual desire. Without human desire of the individual, a tool is a dead thing. But for many school years, students' desire remained unwelcome in the classroom as the students have to constantly do what the teacher assigns them to do throughout a school day, a school year, and the entire school term. Even when a student's desire overlaps with the school curriculum, many teachers worry that the student's lively academic interest can highly jeopardize their control over the flow of instruction and the curriculum preplanned by them (Kennedy, 2005). As students enter conventional schools, their desires—their interests, questions, initiatives for activities—in the academic field shrink to the point of their repulsion to the school academics (Collins & Halverson, 2009; Sidorkin, 2009; Zhao, 2009). Many of the students leave the school based on the technological approach as "educational zombies"—they may perform well on tests and exams but they are lifeless in the field of academics, as their "toolkit" acquired in school is alienated from them.

Among many others, the main negative consequences of the technological approach to teaching and learning are (a) student alienation from academic learning (Varenne & McDermott, 1998); (b) a lack of "learning transfer" i.e., students cannot apply what they "successfully" learned in school outside of school settings (Lave, 1988); (c) a lack of deep understanding in learning and guidance (Schneps, Sadler, & Crouse, 2003); and (d) pedagogical violence and students-teacher noncooperation as a result of the students' ontological disengagement (Sidorkin, 2002).

I wonder if this technological approach to education is an expression of economic drive for requiring predictable and replaceable workers on a systematic reproducible manner.[2] Indeed as consumers in the modern local and global econ-

omy (and clients in institutionalized bureaucracies), we, common people, want "quality services" regardless of the particular workers who provide them. We want replaceable doctors, replaceable bank officers, replaceable lawyers, replaceable teachers, replaceable waiters, replaceable janitors, replaceable nurses, replaceable flight attendants, replaceable firefighters, replaceable police, replaceable judges, and so on. We want our society to work like a clock—reliably and predictably. When we move to another institution or to other workers, we want painless replacement of workers to serve us without any disturbance to the service, such as replacement of the same blocks in a Lego game or the same parts of a car. We, consumers, want standardization of services, labor, relations, knowledge, skills, people, and, yes, standardization of the curriculum and instruction.

An Authorial Alternative

In this theoretical chapter, I will try to develop an alternative, *authorial* approach to teaching and learning based on Bakhtin's *ontological dialogue* approach (Sidorkin, 1999). According to Bakhtin, meaning-making is an essentially dialogic process (Bakhtin, 1999; Matusov, 2009, 2010a; Morson & Emerson, 1989). Applying this to education, I mean that teaching *is* art, a type of performance art based on the *teacher's and students' authorship* rather than a type of standardized technology. I define authorship as a participant's bid for a unique creative contribution fully or partially recognized by a relevant community and by the participant him/herself (this recognition can be problematic, contested, and controversial at times). According to this authorial approach, education involves transformation of the students' and teacher's agency.

In contrast to the mainstream technological view that characterizes teaching and learning in mainstream modern schooling, probably everywhere in the world, based on my observation and reading, I want to introduce an *authorial*, phronetic (i.e., "practical wisdom" Aristotle, ca. 350 b.c./2000; Bulterman-Bos, 2008; Flyvbjerg, 2001) view on education. In doing so, I am proposing an authorial view of learning, according to which learning is transformation of the student's authorship in a targeted practice recognized and validated by members of a community of practice, in a broader sense (Lave & Wenger, 1991). According to this authorial approach, learning language, for example, involves communicative successes of a student being recognized by the language *community* rather than the student's acquisitions or discoveries or construction of self-contained, decontextualized vocabulary, grammar, and meta-knowledge about the language (Lobok, 2001). Based on this authorial approach, I argue that phonemic awareness, vocabulary, grammar, meta-knowledge of linguistic structure such as genre, for example, are

byproducts of language learning rather than its precursors (Scribner & Cole, 1981). Let me discuss the significance of this revision of the traditional technological approach.

The difference between authorial and technological approaches to learning is somewhat akin to the difference between the intelligent design and the evolutionary approaches to biological adaptability of species, which has been and continues to be a site of controversy between Christian fundamentalists (mostly) and science educators in the United States. The intelligent design approach recognizes the complex and marvelously harmonious structural adaption of an organism to its environment and claims that somebody intelligent has to design such an intelligent structure (Dawkins, 1995). Similarly, a technological approach to education recognizes complex and beautifully fitted structure of practices and claims that in order for a student to participate in the practice one has to learn self-contained elements of, and their places in, the complex structure of the practice. For example, from the intelligent design perspective, for a woodpecker to be able to peck the pests out of a tree for food, its brain has to be concussion-resilient as a precursor of the wood-pecking function (Sunderland, 1976). However, from the evolutionary perspective, the concussion-resiliency of the woodpecker's brain is a byproduct, not a precursor, of co-evolution of the animal and its habitat (Ryan, 2003). Speaking from an evolutionary point of view, the concussion-resiliency of a woodpecker's brain is not a natural biological phenomenon but rather a human artifact resulting from the curiosity that led humans to compare the bird's brain with another animal's. Let's take, for instance, a human brain: If a human repeatedly hits his or her head against a tree, this human's brain will suffer a concussion, but a woodpecker's brain does not. "Why is that?!" asks a perplexed, but excited, observer. From an evolutionary point of view, the woodpecker's brain is not a human-like brain plus concussion-resiliency but rather a result of evolution that is different from the evolution of humans (Dawkins, 1995). The woodpecker's brain is not a result of a structural design as a technological approach to biology suggests. And in the same vein, learning language is not based on learning its structure and structural elements, as a technological approach to education insists.

Similarly, from the authorial point of view, to teach language, for example, is to promote and shape the student's linguistic communicative authorship, which is not limited to and determined by its structural elements like phonetic awareness, syntax, and grammar but rather a result of participation in a practice with other people (Lobok, 2001; Reddy, 1979; Wittgenstein & Anscombe, 2001). These structural elements of language practice are abstractions and artifacts of human comparative curiosity that can be only abstracted from the emergent, unique, and improvisational participation of successful participants. A successful participant in language practice is *not* a non-speaker *plus* acquisition of phonetic awareness, syntax, gram-

mar, genre, intonation, articulation, and so on, all of which are self-contained elements abstracted from the lived speech practice. Through the analysis of his own pedagogical practice, Bakhtin (2004) convincingly showed that a grammatical structure is itself a byproduct of somewhat stable but lived negotiation between an author and his or her audience about the author's intended effect on the audience, rather than a result of grammar rules or linguistic structures. Strictly speaking, I think such an abstraction as "language" is probably itself an artifact of human comparative curiosity—sometimes legitimate and sometimes not—rather than a phenomenon of reality.[3] I argue that it is similar to other practices—to teach math, for example, means to promote and shape the student's authorship in a math discourse, their mastery recognized by other members of the math community through addressing and replying mathematically to problems posted by other people and the student him/herself.

I want to offer here an authorial view on learning and teaching that can be reduced to the motto that teaching and learning, like all human endeavors, is about human, unique, irreproducible, irreplaceable and "here-and-now" agency that is based on improvisation, creativity, originality, diversity, and uniqueness. Agency reveals itself through transgressions of the limits and recognized by the self and others as the cause of itself (*causa sui*), legitimate and valuable (positively or negatively; Bakhtin, 1990; Davydov, 2008; Lobok, 2001; Spinoza, White, & Stirling, 1910). Agency is shaped itself in "authorship." Authorship does not only define a new, legitimate type of contribution and participation but also a new *quality* of the participation that is viewed by the relevant community as "good" or "bad" (Matusov & Hampel, 2008). For example, the great Russian writer Dostoevsky wrote not only new novels but he also redefined what a good novel was about. All authors do it in a more or less visible way. Agency, the source of authorship, is what surprises the self and the others and a dialogic bid for recognition from others for this uniqueness and value (Bakhtin, 1990; Matusov, in press).

The observed and proclaimed similarities across human agency are always exaggerated, overrated, inaccurate, irresponsible, immoral, and damaging for human nature and human beings. These similarities turn human agency into non-agency, into a predictable machine that can be understood outside of responsible participation with others. When we focus on similarities, we lose agency—it slips through our fingers like water. In our so-called "Western" technology and knowledge-based civilization, we are fixated on turning agency into non-agency, apparently because non-agency of "immutable mobiles" works so well for our modern economy and bureaucracy that we make agency invisible and devalued in this process.[4] We want to use other people to serve predictably our desires. When the agency of serving people is not recognized and valued, this becomes not the most humane relationship

among people (Bakhtin, 1986). My hope is that technological progress helps us liberate ourselves and others from instrumental, enslaving use of each other, but it cannot be done automatically, by the progress of technology itself, without our active efforts guided by emerging values of humanity. As Bakhtin (1986) argued, this technological approach stops addressing people, genuinely seeking unknown but desired information from them, and turns them into things. Instead of our current efforts of turning humans into replaceable, standardized, predictable machines governed by self-contained, preset, and decontextualized rules, information, programs, producers, and algorithms, we can liberate human agency from submitting to this need by designing machines to do this work.[5]

Education understood as reproduction of a human culture contradicts the notion of agency and authorship I describe above, because agency reveals itself through transcendence of any established pattern on which, however, the notion of "culture reproduction" predicates (Lobok, 2001). However, the contradiction between education and agency can be resolved if (1) the notion of "reproduction of culture" is dismissed as approximate, inaccurate, useless and even damaging—paraphrasing ancient Greek philosopher Herodotus, I can say, "One cannot enter into the same agency (or culture) twice" as agency is what makes people unique; (2) education is understood as joining a human culture through constant creative transcending this preexisting human culture (Lobok, 2001) and acts of responsibility. The notions of active and creative participation in, and contribution to, culture-in-making contrast with traditional notions of reproduction, transmission, and discovery of ready-made culture because the former notions are *agency-based* and the latter notions are essentially *agencyless*.

Let me illustrate this with a personal anecdote. When I started learning English on my arrival in the United States from the USSR, I was focused on how to be understood by others and on how to understand them fluently without focusing on the means-obstacles of our communication. For example, when American people praised my English while we discussed other matters, I knew that my English was bad enough to distract them from what we were talking about. The language as means of communication became visible through our communicative obstacles. For me, when people stopped praising and focusing on my English and started to become consumed exclusively by the topic of our conversation, then I knew that my goal of learning "English language" had been achieved. Not having seen, been aware of, and focused on "English language" was the goal of "English language"—what I call "language disappearance." In our communication, what my interlocutors and I were saying to each other can be seen as our authorship, the recognized production by our agencies, which is characterized by unique, non-replicable, interested, and irreplaceable contributions embedded in a particular time, locality, and

context, with particular participants, responsibilities, desires, goals, and discourses. The structural similarities of our contributions—so-called "structure of English language" (grammar, syntax, genre, accent, vocabulary, and so on)—are byproducts rather than precursors of our communicative successes.

Student Agency in a Technological Pedagogy

I argue that teaching and learning is authorial in any pedagogy (even in the mostly dehumanized activity)—both *conventional* and some *innovative* pedagogies. Although my position may sound paradoxical, especially when applied to conventional technological education, which often neglects if not openly suppresses, student agency, the educational agency of conventional, technological pedagogy can be characterized as bounded by the Assignment Chronotope (Matusov, 2009, 2010a).⁶ Seen in these terms, *ideologically* (i.e., as a desired ideal) both the students' and the teacher's agency is aimed at the students' arriving at the curricular endpoints preset by the teacher (and often by the state via curricular standards, tests, and exams). The role of all participants' agency is viewed as instrumental and non-authorial in this process. The students' agency in conventional education is limited to *willing* participation in unconditional cooperation with the teacher's assignments (assignments in a broader sense of what I call Assignment Chronotope—from homework, to taking notes, to be seated quietly, to not talking with a friend during a lesson, to following the teacher's rules). Conventional student agency is usually assumed to involve the student's willingness to participate in the following major actions:

1. Do unconditionally what the teacher asks you to do (behaviorally, educationally, intellectually, relationally, morally, and so on).
2. Try to understand what the teacher wants from you.
3. Put your efforts, industry, eagerness, intelligence, and diligence toward what the teacher assigns as well and as much as possible, based on the teacher's judgment of what "well" means.
4. Censor your own agendas, desires, genres, and actions that are not sanctioned by the teacher.
5. Restrain and do not support other students who disrupt and deviate from the teacher's assignments.
6. Postpone your self-actualization and goal-defining processes until the " "grown-up" future, when education is over (or at least when the school day is over and you are outside of the school time and space, outside of the

school Assignment Chronotope) (student as "a half being"; see Sidorkin, 2002).

7. Actively desire to do 1–6 (Fendler, 1998).

In short, ideologically, the student's agency in conventional education is about becoming *a willing instrument* for the teacher's instruction (who him or herself is often viewed instrumentally by the state; Fendler, 1998). The student's authorship in conventional education can be characterized as *teacher pleasing authorship*—creative contributions by the student to anticipate and please the teacher's desires.

Of course, this is only an *ideological* construct of student agency in a conventional, technological pedagogy. The reality of student agency in this conventional, technological pedagogy usually involves diverse and at times complicated scenarios: a mixture of cooperation with, resistance to, and departure from the described ideological student agency as a willing instrument for the teacher's instruction (Matusov, 2009, Chapter 6; McLaren, 1993; Waller, 1932; Willis, 1981). Students can actively cooperate with the teacher's demands, can actively resist them, or can actively initiate something outside of the teacher's demands. The teacher can qualify the students' initiatives as resistance and punish them, can approve the students' initiatives (and, thus, the teacher sanctions those initiatives, usually when they go along with the teacher's overall preset curricular endpoint), simply not notice the students' deviating actions, or can notice but decide to ignore the students' self-initiated activities. However, in a conventional, technological classroom, a teacher rarely invites the students' self-actualization and goal-defining to inform curriculum, instruction, and organization of the classroom collective, probably because, in the teacher's view, such activism may jeopardize their timely arrival at curricular endpoints preset by the teacher (Kennedy, 2005) and/or can be seen as challenging teacher authority (Sidorkin, 2002).

Although it can be easier to envision students' authorship in their resistance and initiative to do something beyond the teacher's demands, it might be less clear to see students' creative transgression and improvisational extension of any limits in their willing obedience to and unconditional cooperation with the teacher's assignments (in a broader sense of this term; see above). "Creative unconditional obedience" sounds like a misnomer but it is not. A student's sophisticated ability to understand any arbitrary teacher demands, submit to teacher-driven assignments, and foresee the criteria that the teacher uses to define success requires creativity from the student. However, this creativity is a peculiar and perverse one, denying its own value. It is creativity on how to be non-creative. It is agency creatively striving to act as a willing non-agency and creatively pretending to be an instrument and machine.

One strong common negative outcome of a technological approach to education is apparently suppression of the students' agency in academic areas. There is a kind of agency sickness from school toxicity where students lose connection with their own ontology in the vast fields of academic activities—and as such their inventiveness, curiosity, and connection to content are suppressed. As students spend more and more time in technologically oriented schools, it seems to become more and more difficult for them to initiate activities and learning in areas of academic curricula. Thus, Yazzie-Mintz (2006) found that 50% of US high school students are bored *every day* in their classes. Hart (2006) reported that 82% of Californian ninth and tenth graders perceived their overall school experiences as "boring or irrelevant" (p. 2). In our own research of alumni of an innovative school who went to conventional high schools, the alumni reported on this suppression of their academic agencies, as they could compare the regimes of their past innovative and current conventional schools—as one alumni reports, "[The new, conventional] school sucks all life out of me" (DePalma, Matusov, & Smith, 2009). In conventional schools, students often have very little opportunity, time, and legitimacy to initiate activities and learning in the school academic subjects as the students' agendas would compete with the teacher's preset agendas and assignments. As a result, they often lose interest in academic subjects (Jackson, 1968; Tenenbaum, 1940). The ontology of mainstream schools based on a technological approach—i.e., the ways students experience life in school—apparently suppresses students' agency (Rogers & Freiberg, 1994). Kennedy (2005) reported in her research that many teachers in conventional schools are concerned about their students being less than 100% focused on the teacher-defined tasks (i.e., *off task*); the expectation is that students are supposed to spend 100% of their time in school on tasks and goals they have not defined themselves! However, these teachers are even more concerned with the fact that even when students are on task, they are often *off script*—i.e., their contribution to the teacher's task violates the teacher's expectations. Often when the students' contributions are perceived as being off script, their activity is suppressed by the teacher (Kennedy, 2005). This means that even students' deviations from teachers' expectations are viewed by the teachers as a problem to be corrected.

In one extreme case from my own teaching experience, one of my undergraduate students, a pre-service teacher, even claimed that without constant and forceful demands from school to do things on the teacher's demand, she would not get up from her bed. She thought that by saying that she praised the necessity of conventional schools as a violent force for students' learning, but in fact, in my view, she underlined a problem of conventional schools suppressing student agency—as before entering the school, young children are often full of self-initiated activities even though they can be occasionally bored, which probably means that they strive for extension of their agency. As Indian educator Sugata Mitra powerfully demon-

strated, by giving unschooled children of different ages living in slums access to computers, the children quickly progressed in learning computer and Internet use, and diverse academic subjects even without much adult guidance or even when they did not speak English (the language of the computers and Internet) (Mitra, 2006). In this case, vast learning can be accomplished by students within the space of activities controlled by their own agencies.

In a less dramatic and more systematic case, Llewellyn (1998) reports on an interesting but sad phenomenon, school intoxication, which becomes evident when children who shift from mainstream schools to homeschooling, with its focus on self-initiated activities and responsibility for the student's own learning, refuse to initiate any activities for some time. She calls for parents to give children time for school detoxication and provide them with a vacation, a recognized moratorium on any academic commitment by the students (p. 127), to help recover their agency for self-initiating activities. Sometimes it takes up to a year or even more for students to reignite their self-generated authorship by doing literally nothing and boring themselves to death—the length of the time is usually proportional to the time spent in mainstream school and intensity of school intoxication, according to Llewellyn's observation (p. 130). This phenomenon requires further systematic research investigation.

Zooming In on the Authorial Approach to Education

In contrast to a technological approach, I align the authorial approach to a pedagogical, ideological approach that actively recognizes, values, and actively promotes *the authorial nature* of teaching and learning (and in any other human activity), rather than denies it, as in a technological approach. Authorial learning involves the student's transgression of the preexisting definition of learning in specific curricular areas recognized by the student and other relevant people. As such, it is loaded and charged with the student's personal values, intonations, ontology, intentions, expectations, and goals. Like each authorial artwork, each authorial scholarship, each authorial craft, redefines, respectively, what art is, what science is, what craft is, and, in general, what is the quality in these practices (Matusov & Hampel, 2008). Authorial learning redefines what learning is, what is possible, and what constitutes the quality of learning. At the very least, authorship presents the author's bid for a new definition to the community of practice and broader society. This bid can be accepted or rejected, partially or completely, by some or everybody, permanently or temporary. Sometimes this redefinition is of tectonic jump proportions but more often it is barely visible.

Let me provide an example of a big redefinition of the practice. Recently I interviewed and videotaped six US urban children of diverse ages, ranging from early elementary to late high school, races, and genders about their attitudes toward science, science education in their schools, and the science questions they were currently interested in. I did these videotaped interviews in order for my undergraduate college students, future teachers, to problematize and broaden their definition of science curriculum (along with other pedagogical goals-provocations). A teenage girl named Hannah, who declared immediately that she hated science, revealed later in her interview that she was deeply interested in the Big Bang Theory of the Origin of the Universe.[7] Even more, toward the end of the interview, she started talking about another question that she was deeply interested in, which was "How do we know that we are all not robots?" When I showed this interview to my undergraduate students, they immediately dismissed this question as a scientific inquiry. Some of my students even claimed that it was her daydreaming, goofing around, or, at best, it was her work of fiction. However, they become more perplexed when I told them about British mathematician Alan Turing, one of the most influential pioneers of computer, cybernetics, artificial intelligence and computer science. Turing developed his famous Turing's test:

> A test of a machine's ability to demonstrate intelligence. It proceeds as follows: a human judge engages in a natural language conversation with one human and one machine, each of which tries to appear human. All participants are placed in isolated locations. If the judge cannot reliably tell the machine from the human, the machine is said to have passed the test. In order to test the machine's intelligence rather than its ability to render words into audio, the conversation is limited to a text-only channel such as a computer keyboard and screen. (http://en.wikipedia.org/wiki/Turing_test)

Hannah herself was not sure that her question was scientific and not purely philosophical (she forgot the word "philosophy" but she knew what it meant), but when I presented her with the Turing test at the interview (and later) she got very excited to discuss it, apparently recognizing its relevance for her inquiry. Of course, her inquiry was not limited to the existing investigations in the modern science areas like cybernetics, computer science, and artificial intelligence, but as I interviewed her a bit more, it was clear that it also penetrated philosophy, ethics (e.g., If only I am a human and everybody else is a robot, can I act toward others as if they are robots?), literature (e.g., novels by Dostoevsky; for example, *Crime and Punishment*), teenage self-awareness (e.g., Am I special?), religion (e.g., Does god exist and if so, if he is our ultimate puppet master?), and so on. Hannah's bid for her authorship in science learning was recognized by me but not by my students and only partially by Hannah herself.

Recognizing the scientific value of Hannah's questioning represented, in my judgment, a tectonic shift in redefining what science is and is not, what legitimate science inquiry and science learning for my undergraduate students are. Together with this teenage girl, they discovered that (1) her inquiry has a strong scientific component recognized by the modern scientific community (e.g., such renowned mathematicians as Turing), and (2) the science curriculum may not need to have (and, probably, does not ever have) clear-cut boundaries with other human endeavors. My own personal "tectonic shift" in redefinition of science learning also occurred in this event as I realized that one difficulty of school science education may lie in school's efforts to purify science from all other human endeavors and divorce it from students' personal holistic concerns, and thus from penetrating their lives (see Bakhtin's discussion of the contrast between the ideologies of "the exact" and "humanitarian" sciences, 1986). This makes science portrayed in school an impersonal, disembodied, and decontextualized endeavor and, thus, meaningless and irrelevant for the students in contrast to the real science practice portrayed in sociological research (Latour, 1987; Latour & Woolgar, 1979). For example, one urban elementary school boy told me at the interview that he was interested in building a time travel machine to travel back and save his family from an experience of homelessness. Such types of science inquiries are usually not recognized, welcomed, allowed, capitalized upon, enriched upon and expanded on in school, which makes the school science curriculum difficult, overwhelming, uninteresting, irrelevant, meaningless, procedural, and boring for the students. Furthermore, the fact that such inquiries are not welcomed also makes the school science curriculum equally uninteresting, irrelevant, meaningless, and alienated for teachers, as well as the public at large (including scientific scholars themselves).

Less dramatic redefinitions of learning in authorial learning are less visible for the participants but still are very important for the student's learning. Let's consider an example. As part of a teaching practicum that I organized for my undergraduate students, I work in urban after-school programs helping my students learn how to build good relations with minority children (Hayes & Matusov, 2005; Matusov, 2009; Matusov, St. Julien, & Hayes, 2005). One day, I happened to work with a third-grade boy, Zion, at an urban Latin American Community Center (LACC) in an eastern state of the United States. Zion had to copy new words as part of his homework. He was very reluctant to do that and did not pay much attention to his (mis)spellings, which defeated the whole purpose of this rather meaningless homework drill. One of my undergraduate students observed that situation and asked me if I could do something to turn the situation around for the better. I said that I would try but I could not guarantee that I could do any good.

I approached the problem by trying to turn the meaningless activity for Zion of copying words into a Scramble-like game of finding as many shorter words as possible within the targeted word that Zion had to copy three times. The educational success of this new activity was not in the mere fact that it was entertaining, or that Zion liked the new activity, or that he started making fewer spelling mistakes—although all of that was the case—but in the fact that it focused him on exploring patterns within the word and eventually led him to discovering morphemes of words. Let me illustrate it with an example within this activity.

One word Zion had to copy in his homework was "exit." Zion looked at the word and said, "I see 'it'" (exIT). And then he exclaimed, "And 'ex'" (EXit). I asked him what "ex" meant. Zion replied, "'Ex', like in 'ex-boyfriend.' My mom has an ex-boyfriend." And he added, "I hate him."

I asked him, "Why?" Zion replied, "Because he constantly fought my mom." I asked, "Fought?!" "They constantly yelled at each other," explained Zion. "But how did he treat *you*?" I asked him. "OK. He took me to sports games and bowling. He read me books and gave me presents." I asked, "Do you think he liked you?" Zion replied with hesitation, "I guess. . . . But why did he fight my mom?" I thought for a moment and said, "Sometimes two good people can't live well with each other and it can be better for them to live separately." Zion agreed, "Yeah, it's like me and my cousin—we like to play but we also fight a lot." Suddenly, he interrupted himself, "I know how this word is called!"

"How? What word?" I asked. Zion exclaimed with excitement, "This one, 'exit'. It is a *compound*. We studied it in school!" "How come?" I asked. "Because it is made out of two words, 'ex' and 'it'! It's a compound!"

"No, it's not!" said Maria, a girl working on her homework on another computer next to us. She was probably the same age as Zion.

"Yes, IT IS!" yelled Zion.

"Why do you say that it is not?" I asked Maria.

"Just because. I feel it," she replied, glued to the computer screen and not even looking in my direction.

"What makes you feel that way?" asked I.

"I don't know, but it does not feel [like] it's right," Maria replied, still without turning her head.

"'Exit' consists of two words, like 'ex-boyfriend'—it's a compound!" exclaimed Zion.

I felt that the girl was up to something important but she did not have the terminology to explain it clearly, so I helped her. "Are you trying to say that 'ex' and 'it' don't have anything to do with 'exit'?" She turned her head to me, smiled, and nodded, as if acknowledging my presence, as a living person, for the first time. "So, are you trying to say that a compound should consist of not just any words but words

that contribute to its meaning?" She smiled at me and nodded again. I continued, "Such parts of the word that constitute meaning are called 'morphemes.' For example, a compound 'ex-boyfriend' consists of three word-morphemes: 'boy,' 'friend,' and 'ex'—all of which contribute to the meaning of being a *former boyfriend*. However, morphemes might be not whole words but meaningful parts of the word."

However, as my colleague, Katherine von Duyke, pointed out in her feedback to an earlier version of the manuscript, both Maria and I were wrong insisting that the word "ex" has nothing to do with the word "exit." I checked the *Oxford English Dictionary* and confirmed Katherine's objection, as the English word "exit" has Latin origin "exitus" where morpheme "ex" means "out." I wonder if this Latin word has actually the Greek origin from "exodus"—a true compound meaning "a way out": "ex" (out), "odus" (way, road; cf. "odyssey"). It is still probably true that "exit" is not a compound in English because of "it" is not a recognizable morpheme in English. I wish I had known this complexity before and introduced it to the children (who may find it later on, hopefully). But, on the other hand, this is an inherent nature of inexhaustible and bottomless learning in any curricular topic.

At that time the girl was working (copying from a computer screen for her homework) on the word "beautiful" and pointed out that I saw two morphemes in the word: "beauti" and "ful"—something being "full of beauty." Zion pointed at the word "apples" and explained to us that he saw two morphemes there: "apple" and "s" that indicated that there were many apples, not just one. Maria, Zion, and I started searching for more morphemes in words we could find around us. Focusing on recognizing morphemes of words may help kids to become better readers and spellers (Davydov, 2008), but the teacher needs to know the language art curriculum well to recognize and use these teaching moments and design good educational activities; otherwise, he or she will likely pass these opportunities by without even noticing them. These never-fully-unavoidable missed teaching moments also reflect the inherent nature of education, however.

In this example, the teacher genuinely learning about the child and their focusing on improvisational instruction and emerging academic curriculum fed each other. The word "ex" allowed Zion to introduce the problematic situation in his family life, while his deep experience with the concept of ex-boyfriend led him to recognize a (pseudo)compound in the word "exit." Making meaning of troubling events, making meaning of words, making sense of word structure are intertwined and through this intertwining constantly redefine the language art curriculum, developing personal trajectories in learning that were very different for Zion, Maria, me, and my student (who silently observed the events from a distance). This makes the process of learning (and teaching) unique, unpredictable, probabilistic, and eventful (Lobok, 2001): What if there were no pseudo-compounds in Zion's homework? What if he had not recognized one? What if he had no problem with

his mom's ex-boyfriend? What if Maria was not around? What if she did not challenge Zion? What if I were less knowledgeable about the nature of morphemes? What if my student did not invite me? and so on. The teacher has to create a rich and complex learning environment to increase the probability for such meaningful learning events to occur and provide guidance to expand and capitalize on these events, although these events cannot be ever guaranteed or fully known in advance (Lobok, 2001).

Another important aspect of authorial learning is that through it, students author themselves in the society, culture, practices, and discourses. Through authorial learning, the students realize themselves; define their own voices; address and respond to others; engage and transform the culture; define new goals; develop new desires and interests; take responsibility for their actions, opinions, views, and values; reply and address voices of relevant and important others (living in past and now) (Matusov & von Duyke, 2010); bring new definitions of quality; redefine practices and values (Lobok, 2001). I agree with Purkey, who argues for recognition that people (students) are the final agency for their own actions and learning.

> Attempting to get others to do what is wanted without involving them in the process is a lost cause. Even if the effort to control people without their cooperation is successful, the energy expended is usually disproportionate to what is accomplished. Each individual is the highest authority on his or her personal existence. Given an optimally inviting environment, each person will find his or her own best ways of being and becoming. (Klag, 1994, p. 1, describing Purkey's position).

One difference, however, between authorial learning and many other authorial practices is that it is process- rather than product-oriented. Or putting it in other words, the process of learning is its product (Wertsch & Stone, 1978). Another difference is that learning is not a practice in its own right but an aspect of any other practice (Lave, 1992). In addition, one of the most important aspects of authorial learning is that it defines its own quality that may not exist *a priori*. All these aspects make the authorial-learning assessment somewhat elusive but not impossible when assessment of author learning includes the student as a legitimate participant in defining this assessment.

Authorial Teaching: Dialogic Provocations and Two Types of Students' Authorship in Education

In my view, the main purpose of the teacher's authorial teaching is to promote and support the students' authorial learning. So far, I see two major mutually inclusive

ways of doing that: (1) through promoting students' *responsive authorship* and (2) through supporting students' *self-generated authorship*. In the first, students develop their authorship in response to teacher-developed *dialogic provocations* that ontologically engage them in some inquiry through provoking responses that students are asked to justify and test against alternative responses. These alternative responses can be their peers' or historically developed voices of the past and the present presented by the teacher through diverse media. An example of a teacher's role in promoting responsive authorship is my work with Zion and Maria described above. I can extract at least four dialogic provocations in this mini-lesson on language art and family relations.

1. First, the dialogic provocation was my introduction of the Scramble-like game focusing Zion (and me) on perceiving and constructing words within a copied word in his homework. It generated his excitement at working with words through his creative contributions, guided by, but not limited to, our mutual modeling of each other when we found words in a word and by his own successes.

2. My second dialogic provocation was challenging Zion about his view that the word "exit" was not a compound—I recognized its provocative potential for introducing the concept of morphemes. It required Zion to articulate how he understood the concept of compounds and meaning of the word "ex-boyfriend."

3. My third dialogic provocation was to attract Zion's attention to how his mom's former boyfriend treated and related to him, which led Zion to reconsider his attitude toward that man and to start developing a new relationship with him, independent of his mom's relationship with her ex-boyfriend.

4. Finally, my fourth dialogic provocation was to support Maria's challenge of Zion and introduce the concept of morphemes, which allowed Maria to articulate better her objection to Zion's claim that the word "exit" was a compound word and to help the children start seeing morphemes in many words. This arguably could help them with their spelling and reading.

It is important to note that dialogic provocations, on which promoting students' *responsive authorship* depends, can be *both* emergent, improvisational, dialogic, creative, eventful, and opportunistic (as it was in the example) *and* preplanned, prepared by the teacher in advance, based on their knowledge of the students' needs and the curriculum.

In students' *self-generated authorship*, the teacher supports and deepens the students' self-initiated inquiries, assignments, and learning journeys. For example, in the interview with Hannah, an inner-city teenage girl, about her science interests

she started with her own inquiry about robot-humans. Later, I sent an email to her through her mom with a link to the description of the Turing test:

> Can you pass the following link to Hannah about Alan Turing's test http://en.wikipedia.org/wiki/Turing_test as she may find it interesting for her science inquiry, "How do we know that we all are not robots?" I wonder what she thinks about that.

Hannah replied to me (through her mom's email account) and asked me to place her reply on my class web for my undergraduate students, future teachers:

> Hi Eugene,
>
> i wish i could take the Turing test, it seems very interesting. . . .
>
> I watched the video of you interviewing me and I was wondering how you can tell people from robots. I think that test would work because if the machine were to write you their words would be more precise, and if the person was a girl, they would use "like" a lot in their writing, but a machine would not.
>
> Thanks for interviewing me,
>
> Hannah
>
> PS to the future teachers in the classroom—take your future students seriously no matter what they say because the world can be viewed in many kinds of ways.[8]

I do not know if Hannah will pursue her inquiry further but my recognition, support, and the link I provided her arguably made her view on her own inquiry more serious. She visited and read the site and became more informed, through an outside, professional discourse, and thought-provoked. From her reply it is clear that she started addressing the Turing test by developing her own testing ideas alongside her original, self-authored inquiry.

The difference between the students' responsive authorship and the students' self-generated authorship is never clear-cut because a close investigation of the responsive authorship reveals germs of the students' self-generated authorship as they creatively extend the frame of the teacher's dialogic provocation. Similarly, a close analysis of the students' self-generated authorship can reveal that student-initiated inquiries, assignments, and learning journeys are always triggered by responses to other people's contributions that provoke the students' original interest and give them impulse for their creative contributions. However, that said, I insist

that these two distinct types of student authorship generate different qualities of learning and guidance that can even be in conflict with each other, as the response authorship gives overall initiative and control of the learning chronotope to the teacher while the self-generating authorship gives them to the students (see below).

The authorial nature of dialogic teaching reveals itself in its emergent, uncertain, improvisational, creative, dialogic, eventful, situational, and opportunistic features even when it is planned. The teacher's dialogic provocations, mapping students' ideas, providing alternatives, promoting the testing of ideas, and so on cannot guarantee the success and do not define the students' responses and initiatives. As Lobok (2001) argues, authorial guidance has a probabilistic character based on the teacher's hope and trust in the student's eventual creativity and authorial learning. The authorial teaching is based on the teacher's recognition of and capitalizing on emergent teaching–learning moments with the students (see my examples above). This is possible only when the teacher him or herself is an active author of the culture, "a person of culture" (Berlyand, 2009; Bibler, 2009; Lobok, 2001; Miyazaki, 2007), which means that the teacher enthusiastically and seriously works on diverse curricular subjects as an active learner, scholar, and practitioner and "thinks aloud" with his or her students during the lesson. However, the voice of the teacher in the classroom is not of the Objective Expert #1 (i.e., the person-less voice of the truth) but of a subjective and interested epistemological learner among other fellow learners i.e., his or her own students (and colleagues). I argue that this role of the teacher as an epistemological learner is possible because knowledge has a communal nature and collapses when the community does not support it. The teacher's knowledge often collapses in the classroom due to the students' unfamiliarity with and untestability of the knowledge (yet). It collapses like communication and language knowledge collapse in a foreign country when speakers do not have a common language (Matusov, 2009). I argue that knowledge does not exist by itself but always with somebody and it is always personified, authored, situated, and embodied—it is a process and a verb and not a thing and a noun (Von Duyke & Matusov, 2010).

The notions of authorial teaching and authorial learning focus educators and researchers on the relationship between the teacher and the student, in which the teacher has to promote the student's authorial learning. In this emergent process, the student often has different ideas, feelings, values, wants, and desires than the teacher does. This difference in their subjectivities is something that the dialogic teacher supports, values, and promotes, rather than something he or she tries to eliminate, as in conventional teaching. The difference in the teacher-student subjectivities is the key principle of authorial teaching (Matusov, in press). The second aspect of authorial teaching and authorial learning is that both teaching and learning are unique, situational, creative, unexpected, personal, eventful, "deedful," risky, capricious, improvisational, fateful, dialogue-oriented, emergent, just in time, col-

lective, and inspirational (Bakhtin, 1993; Lobok, 2001). This contrasts with technological understanding of the teaching and learning as standard, decontextualized, instrumental, expected, impersonal, routinized, assigned, stable, safe, technical, goal-oriented, predictable, pre-planned, individual, and on demand.

I respectfully disagree with my colleagues in dialogic pedagogy Lensmire's (1997) and Miyazaki's (in press) very interesting claims that in the authorial polyphonic teaching the teachers author their students like Dostoevsky authored his characters in his polyphonic novels (Bakhtin, 1999). Teachers do not author students. Students are not characters of the teacher's "polyphonic novel" i.e., polyphonic teaching. Although some characters "can surprise" their authors and "act" in violation to the author's initial creative plans (Bakhtin, 1999), the characters in the literary artwork remain transparent to the authors who are their creators. Students are not creations of the teacher, they do not unconditionally cooperate with the teacher's plot (or the "logic" of the emergent plot), they have voices that the teachers do not have, and they are not transparent to the teachers' comprehension and imagination. In contrast to novel writers and their characters, teacher and students coexist ontologically in the physical world and act upon each other through their physical and communal bodies.

There is only one legitimate author of the student, namely the student him or herself as unique, limitless, unfolding universe (Klag, 1994; Lobok, 2001). The parallel of authorial teaching with Dostoevsky's polyphonic novels in Bakhtin's interpretation can be dangerous as, in my view, it leads to unavoidable stifling, arresting, endpointing, and manipulating of the student's agency. It suppresses the student's initiative, self-realization, creativity, and self-authoring that is not recognized by the teacher. By the definition of agency and authorship (see above), student agency always escapes any preexisting boundaries and makes its own recognition difficult for the teacher and never fully possible. By itself, this eventual and unavoidable lack of understanding and recognition of the student's authorship by the teacher is not a problem if the teacher assumes a humble position and does not claim his or her own authorship of the student. The student's eventual non-cooperation with the teacher-defined agenda has to be expected and valued as extremely educational. The teacher's eventual non-understanding of the student's activity and new emerging values also has to be expected and recognized as an important educational event. These events are not necessarily breakdowns in dialogic education but they can be actually its highest points, as the teacher says to his or her student, "I do not fully understand, appreciate, and value what you are doing but I want to encourage you to keep seeking help from others in your new endeavor" (see Zhao, 2009, for more discussion of this attitude). These are not necessarily words of goodbye to the student but they can be (partially or even fully).

Concluding Remarks

Authorial teaching involves a unique and personified taking of responsibility (cf. Bakhtin, 1993) for a teacher's own teaching deeds, actions, judgments, pedagogical and epistemological learning, and relationships with the students and their consequences. The teacher authors him or herself in the eventful process of his or her own teaching practice. Teachers, like their students, are irreplaceable and unsubstitutable—like writers. There cannot be another Dostoevsky or Tolstoy or Salinger. Teachers are unique as well. They teach through their life, their ontology, their responsibility, their feelings, their deeply thought ideas, their values, their complex network of social relations, their limitations and transgressions, their physical bodies, their being here-and-now in the world. Their teaching is based not on teaching techniques and strategies that exist outside of them in the world "out there" and can be tested by scientific research. Rather, their teaching exists as the unfolding eventful process of authoring, for which they take responsibility. Each teacher leaves a unique and unrepeatable historical "here-and-now" trace, an autobiographical trajectory, of his or her teaching. Like critical literary study, educational scientific research can help educators to recognize important lessons from these unique authorial trajectories but they cannot guarantee good teaching in future for another or even the same teacher.

Finally, I see two major tensions in the concept of authorial teaching. First is how the teacher can promote the student's authorial learning—his or her authorship—in a subject matter and beyond. In other words, if a teacher wants to teach a student some particular academic subject, practice, discourse, skill, or knowledge, how the teacher can ontologically engage the student in this learning when the student is already engaged in a zillion other, competing activities. Second is how the teacher can engage the student in important learning experiences (i.e., responsive authorship), while preserving their freedom to opt out of these experiences and design, initiate, and choose different ones (i.e., self-generated authorship). These two tensions reflect some struggle between the teacher's and the student's agenda. In my view, the guiding principle of resolving this tension can be found in Plato's *Meno* (ca. 385 b.c./1961), where Socrates rightly prioritized following Meno's inquiry about the origin of virtue rather than imposing his own (i.e., the nature and definition of virtue). To be relevant, the teacher has to make him or herself useful for the student. At the end of the day, the teacher exists for the students and not the other way around. However, further careful consideration of these two important tensions in authorial education goes beyond the scope of this paper.

Acknowledgments

Notes

1. I want to dedicate this chapter to the memory of Sigrun Gudmundsdottir, a former editor of *Teaching and Teacher Education Journal* and a very bright scholar. In 1998, she asked me to write a paper titled "Knowledge Does Not Exist"—the statement that I, a then assistant professor, passionately and a bit hastily had made at an AERA pre-session in San Diego in my debate with Courtney Cazden, which Sigrun had attended. I promised to do so but until now I could not fulfill that promise to Sigrun, who unfortunately was taken before her time by cancer. With this paper I want to express my great gratitude to Sigrun for her support of and belief in emerging scholars (I know that I am not the only one she helped).

2. I wonder if this type of economy can be characterized as "industrial" (which can be capitalist or socialist or mixed), contrasted with pre-industrial and post-industrial (Collins & Halverson, 2009).

3. Traveling from Germany to the Netherlands, it is difficult to know when "German language" ends and "Dutch language" begins. But my point is much deeper than noting the arbitrariness and fluidity of national "languages." I argue that "language" is an artifact of noticing means-obstacles of communication that distract the person from communication itself. For example, my mother-in-law, an immigrant from Russia to the United States with heavily broken English, often adds, "I spoke in *language* with him [i.e., with a native English speaker]" to emphasize that she spoke to a person in *English*, which is usually difficult for her and in which she takes legitimate pride. When she refers to her speaking in Russian, she usually says, "I spoke with him"—notice that the means-obstacles are absent here. Similarly, the notion of "concussion-resiliency" only emerges in a human observer when he or she imagines another animal, like humans for example, hitting the firm wood. A woodpecker does not have any concussion-resiliency, it just pecks the wood to get its food—wood insects. In my view, these artificial constructs are not always without merit because human curiosity can be legitimate but their usefulness should be closely monitored for legitimacy. For example, I do not have much problem with such legitimate inquiries as "how to develop a sense of *language disappearance* for a learner so the communicative means become invisible for him or her" or "how to make a concussion-resilient helmet for a boxer" (see Bakhtin, 2004, for an example of a legitimate use of linguistic elements in authorial education).

4. See pioneering ethnographic work by Wenger (1998), who reveals the human agency in routinized work by data entry workers in an insurance company.

5. Of course, I may be too optimistic in my hope in the liberating power of the technological progress shared by many others (e.g., Collins & Halverson, 2009; Toffler, 1980; Zhao,

2009). I wonder if our aspiration to create a robot—the term was invented by Czech writer Karel Čapek in the 1930s and literally can be translated from Slavic languages as "a worker," one who works—is based on our deep and dark desire for *an ideal slave* without any moral implications for us. I wonder if a more modest goal can be to elevate human agency rather than to completely eliminate instrumental use of people by each other.

6. Bakhtin (1991) defined "chronotope" as a unity of time, space, and values in which events unfold.

7. All names of children mentioned in this chapter are pseudonyms.

8. I preserved Hannah's spelling here.

References

Aristotle. (2000). *Nicomachean ethics* (R. Crisp, Trans.). Cambridge, England: Cambridge University Press. (Original work published ca. 350 b.c.)

Bakhtin, M. M. (1981). *The dialogic imagination: Four essays by M. M. Bakhtin* (C. Emerson & M. Holquist, Trans.). Austin: University of Texas Press.

Bakhtin, M. M. (1986). *Speech genres and other late essays.* Austin: University of Texas Press.

Bakhtin, M. M. (1990). *Art and answerability: Early philosophical essays* (V. Liapunov, Trans.; 1st ed.). Austin: University of Texas Press.

Bakhtin, M. M. (1993). *Toward a philosophy of the act.* Austin: University of Texas Press.

Bakhtin, M. M. (1999). *Problems of Dostoevsky's poetics* (Vol. 8). Minneapolis: University of Minnesota Press.

Bakhtin, M. M. (2004). Dialogic origin and dialogic pedagogy of grammar: Stylistics in teaching Russian language in secondary school. *Journal of Russian & East European Psychology, 42*(6), 12–49.

Berlyand, I. E. (2009). A few words about Bibler's dialogics: The School of the Dialogue of Cultures conception and curriculum. *Journal of Russian & East European Psychology, 47*(1), 20–33.

Bibler, V. S. (2009). The foundations of the School of the Dialogue of Cultures Program. *Journal of Russian & East European Psychology, 47*(1), 34–60.

Bulterman-Bos, J. A. (2008). Clinical study: A pursuit of responsibility as the basis of education research. *Educational Researcher, 37*(7), 439–445.

Collins, A., & Halverson, R. (2009). *Rethinking education in the age of technology: The digital revolution and schooling in America.* New York, NY: Teachers College Press.

Davydov, V. V. (2008). *Problems of developmental instruction: A theoretical and experimental psychological study* (P. Moxhay, Trans.). Hauppauge, NY: Nova Science Publishers.

Dawkins, R. (1995). *River out of Eden: A Darwinian view of life.* New York, NY: Basic Books.

DePalma, R., Matusov, E., & Smith, M. (2009). Smuggling authentic learning into the school context: Transitioning from an innovative elementary to a conventional high school. *Teacher College Record, 111*(4), 934–972.

Fendler, L. (1998). What is it impossible to think? A genealogy of the educated subject. In T. S. Popkewitz & M. Brennan (Eds.), *Foucault's challenge: Discourse, knowledge, and power in education* (pp. 39–63). New York, NY: Teachers College Press.

Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again.* Oxford, England: Cambridge University Press.

Hammersley, M. (1997). Educational research and teaching: A response to David Hargreaves' TTA lecture. *British Educational Research Journal, 23*(2), 141–161.

Hargreaves, D. H. (1996). *Teaching as a research-based profession: Possibilities and prospects.* Retrieved from http://www.bera.ac.uk/files/resourcesfiles/educationalresearch/hargreaves_1996.pdf

Hargreaves, D. H. (1997). In defense of research for evidence-based teaching: A rejoinder to Martyn Hammersley. *British Educational Research Journal, 23*(4), 405–419.

Hart, P. D. (2006). *Report findings: Based on a survey among California ninth and tenth graders.* Retrieved from http://www.connectedcalifornia.org/downloads/irvine_poll.pdf

Hayes, R., & Matusov, E. (2005). From "ownership" to dialogic addressivity: Defining successful digital storytelling projects. *Technology, Humanities, Education, Narrative Journal, 1.* Retrieved from http://thenjournal.org/feature/75

Jackson, P. W. (1968). *Life in classrooms.* New York, NY: Holt, Rinehart and Winston.

Kennedy, M. M. (2005). *Inside teaching: How classroom life undermines reform.* Cambridge, MA: Harvard University Press.

Klag, P. (1994). A new look at invitational education. *The Collaborator, 5*(14), 1–2.

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society.* Cambridge, MA: Harvard University Press.

Latour, B., & Woolgar, S. (1979). *Laboratory life: The social construction of scientific facts.* Beverly Hills, CA: Sage Publications.

Lave, J. (1988). *Cognition in practice: Mind, mathematics, and culture in everyday life.* Cambridge, England: Cambridge University Press.

Lave, J. (1992, April). *Learning as participation in communities of practice.* Paper presented at the meeting of the American Educational Research Association, San Francisco, CA.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, England: Cambridge University Press.

Lensmire, T. J. (1997). The teacher as Dostoevskian novelist. *Research in the Teaching of English, 31*(3), 367–392.

Llewellyn, G. (1998). *The teenage liberation handbook: How to quit school and get a real life and education* (Rev., 2nd ed.). Eugene, OR: Lowry House.

Lobok, A. (2001). *The probabilistic world: The chronicles of the philosophical-pedagogical reflections of an educational experiment.* Yekaterinburg, Russia: Association of Small Businesses.

Matusov, E. (2009). *Journey into dialogic pedagogy.* Hauppauge, NY: Nova Science Publishers.

Matusov, E. (2010a). *Chronotopes in education: Conventional and dialogic.* Manuscript submitted for publication.

Matusov, E. (2010b). *Four ages of our relationship with the reality: An educationalist perspective.* Manuscript submitted for publication.

Matusov, E. (in press). Irreconcilable differences in Vygotsky's and Bakhtin's approaches to the social and the individual: An educational perspective. *Culture & Psychology.*

Matusov, E., & Hampel, R. (2008). Two perspectives on promotion. *Academe, 94*(1), 37–39.

Matusov, E., & von Duyke, K. (2010). Bakhtin's notion of the Internally Persuasive Discourse in education: Internal to what? (A case of discussion of issues of foul language in teacher education). In K. Junefelt & P. Nordin (Eds.), *Proceedings from the Second International Interdisciplinary Conference on Perspectives and Limits of Dialogism in Mikhail Bakhtin* (pp. 174–199). Stockholm, Sweden: Stockholm University.

Matusov, E., St. Julien, J., & Hayes, R. (2005). Building a Creole educational community as the goal of multicultural education for preservice teachers. In L. V. Barnes (Ed.), *Contemporary teaching and teacher issues* (pp. 1–38). Hauppauge, NY: Nova Science Publishers.

McLaren, P. (1993). *Schooling as a ritual performance: Towards a political economy of educational symbols and gestures* (2nd ed.). London, England: Routledge.

Mitra, S. (2006). *The hole in the wall: Self-organising systems in education.* New Delhi, India: Tata McGraw-Hill.

Miyazaki, K. (2007, July). *Teacher as the imaginative learner: Egan, Saitou, and Bakhtin.* Paper presented at the 2nd Annual Research Symposium on Imagination and Education, Vancouver, Canada.

Miyazaki, K. (in press). Encountering with another dialogic pedagogy: A voice from Japan. *Journal of Russian & East European Psychology.*

Morson, G. S., & Emerson, C. (1989). *Rethinking Bakhtin: Extensions and challenges.* Evanston, IL: Northwestern University Press.

Plato. (1961). *Meno* (R. S. Bluck, Trans.). Cambridge, England: Cambridge University Press. (Original work published ca. 385 b.c.)

Reardon, J., & Mollin, D. (2009). *Ch-ch-ch-changes: Artists talk about teaching.* London, England: Ridinghouse.

Reddy, M. J. (1979). The conduit metaphor: A case of frame conflict in our language about language. In A. Ortony (Ed.), *Metaphor and thought* (pp. 284–324). Cambridge, England: Cambridge University Press.

Rogers, C. R., & Freiberg, H. J. (1994). *Freedom to learn* (3rd ed.). New York, NY: Merrill and Maxwell Macmillan International.

Ryan, R. (2003). *Anatomy and evolution of the woodpecker's tongue.* Retrieved from http://www.talkorigins.org/faqs/woodpecker/woodpecker.html

Schneps, M. H., Sadler, P. M., & Crouse, L. (2003). *A private universe: Misconceptions that block learning* [videorecording]. Santa Monica, CA: Pyramid Media.

Scribner, S., & Cole, M. (1981). *The psychology of literacy.* Cambridge, MA: Harvard University Press.

Sidorkin, A. M. (1999). *Beyond discourse: Education, the self, and dialogue.* Albany: State University of New York Press.

Sidorkin, A. M. (2002). *Learning relations: Impure education, deschooled schools, and dialogue with evil.* New York, NY: Peter Lang.

Sidorkin, A. M. (2009). *Labor of learning: Market and the next generation of education reform.* Rotterdam, the Netherlands: Sense Publishers.

Spinoza, B. D., White, W. H., & Stirling, A. H. (1910). *Ethic* (4th ed.). London, England: H. Frowde.

Sunderland, L. D. (1976). Miraculous design in woodpeckers. *Creation Research Society Quarterly*, *12*(4), 186.

Tenenbaum, S. (1940). Uncontrolled expressions of children's attitudes toward school. *Elementary School Journal*, *40*(May), 670–678.

Toffler, A. (1980). *The third wave* (1st ed.). New York, NY: Morrow.

Varenne, H., & McDermott, R. P. (1998). *Successful failure: The school America builds*. Boulder, CO: Westview Press.

Von Duyke, K., & Matusov, E. (2010). *Embodied and "disembodied" education*. Manuscript submitted for publication.

Waller, W. W. (1932). *The sociology of teaching*. New York, NY: J. Wiley & Sons.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, England: Cambridge University Press.

Wertsch, J. V., & Stone, C. A. (1978). Microgenesis as a tool for developmental analysis. *Quarterly Newsletter of the Laboratory of comparative Human Cognition*, *1*(1), 8–10.

Willis, P. E. (1981). *Learning to labor: How working class kids get working class jobs* (Morningside ed.). New York, NY: Columbia University Press.

Wittgenstein, L., & Anscombe, G.E.M. (2001). *Philosophical investigations: The German text, with a revised English translation* (3rd ed.). Malden, MA: Blackwell.

Yazzie-Mintz, E. (2006). *Voices of students on engagement: A report on the 2006 High School Survey of Student Engagement*. Retrieved from http://letsgetengaged.wikispaces.com/file/view/HSSS E_2006_Report.pdf

Zhao, Y. (2009). *Catching up or leading the way: American education in the age of globalization*. Alexandria, VA: ASCD.

Aesthetics of the Beautiful

Ideologic Tensions in Contemporary Assessment

E. JAYNE WHITE

Pedagogy is an uncertain art. Yet by its very nature, contemporary teaching and learning practice typically suggests that the expert teacher must come to know their student well enough to plan and predict for educational challenges that will expand and extend their thinking. In many countries, this process is underpinned by bureaucratic ideology that has persuasively developed an agenda for assessment as accountability for pedagogy. As a result assessment practice in these educational institutions is very public, highly accountable and heavily prescribed through curriculum documents that claim to encompass societal agendas. In some cases, such practices are even legislated. Assessment practice is now seen as integral to the pedagogical process since it is through assessment that the teacher purportedly comes to understand the learner; thus providing a rationale for the teaching approaches and strategies that are applied in order to progress learning. In this chronotopic location I suggest there is little room for uncertainty, since the quest to capture the "essence" of the learner and mould them towards societal goals is as much a political agenda of accountability as it is pedagogical.

In the midst of such ideologic landscapes, artistic modes of assessment jostle to take their place within the heteroglot. In early childhood education, *Reggio Emilia* in Italy, *Kei Tua o Te Pae* in New Zealand, and the *Mosaic approach* in the United Kingdom have led these shifts. Through such means, educationalists and theorists claim to capture a fuller representation of the learner through creative doc-