Channeling John Dewey: What Would Vermont's Philosopher of Democracy Have to Say About Personalized Learning?

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Abstract

In John Dewey's educational framework, the process and product are inseparable; achieving democratic ends cannot result from undemocratic means. For him, the full humanization of people depended not upon externally imposed curriculum and management systems, but rather on responding to the intrinsic needs, interests, and powers of the individual to be educated. The trend in many states on personalized learning, flexible pathways, and proficiency-based assessment, provides a foundation for transforming the conventional system of education, with its standardization, testing, and grading towards Dewey's vision of a more socially just, inclusive, and (small d) democratic system.

So, what might Dewey have to say about personalized learning as a model with the potential to revolutionize the entrenched system? This essay addresses five problem-situations and questions that might merit his consideration:

- 1. The contradiction between personalization and the creation of democratic community-building;
- 2. Corporate interest in personalized learning, and the 'perils of the personalized playlist';
- 3. Shifting from individual to ecological intelligence;
- 4. Challenging the 'school-to-college-and-career' pipeline; and
- 5. Personalization and the elusive quest for equity.

Personalized learning is one of the most important developments in educational reform and renewal toward a more socially just, egalitarian system with the potential to engage students fully in their learning and in their communities. However, there are many pitfalls along the road to implementation, from the problem of stagnant mindsets and mental models to corporate hijacking of the discourses around personalization. This essay highlights ways that we might best avoid these snares, so that the full power of personalized learning might be realized.

INTRODUCTION

In 1916, two treatises were published which have come to exemplify the competing paradigms of 20th century American (U.S.) education. One was issued by a superintendent of schools who would become the nation's first theorist of educational administration. Ellwood Patterson Cubberley emphasized the role of education as a force for widespread literacy, equalization of opportunity, and the cultivation of citizens for a democracy. Cubberley (1916) believed that the processes of schooling should be modeled on those of industry, which was successfully mobilizing capital and resources in this new era:

Our schools are in a sense factories in which the raw materials are to be shaped and fashioned into products to meet the various demands of life. The specifications for manufacturing come from the demands of the twentieth century civilization, and it is the business of the school to build its pupils to the specifications laid down. This demands good tools, specialized machinery, continuous measurement of production to see if it is according to specifications... (p. 338).

Cubberley's (1916) words provided an apt metaphor of schooling for the industrial age. It is worth noting that this idea is more than a metaphor however; it was literally the form of educational organization promoted by social engineers and school administrators for very specific purposes. In their efforts to "Americanize" the many immigrants flooding our shores, the elite managers of society decided that we needed a common curriculum (though differentiated by social class), prescribed doses of academic subject matter measured in credit hours or "Carnegie units," graded course work, periodic testing, and a sequential progression through the school curriculum. Mass schooling required these sorts of efficiencies, which were only possible with the standardization of all of the educational components. Cubberley's words epitomize what curriculum scholars call the "standardized management paradigm." Larry Cuban (2003) provides an historical analysis of this management approach and concludes with a summary of its basic assumptions:

- that the best measures of improved teaching and learning are taking more academic subjects, scoring well on standardized tests, securing credentials, and moving into skilled jobs;
- that better management and rigorous academic standards would produce better teaching and learning and higher test scores;
- that penalties and rewards get teachers to teach better and students to learn more.

The key characteristics of this "factory model" of education are centralized planning, hierarchical forms of authority and management, an emphasis on procedures, the separation of school from the community, the standardization of curriculum and aims, and the production of identical results. One perhaps unintended outcome of the factory model has been "dehumanization," the sense among students that they are merely numbers in a grade book, not individuals with real interests and concerns, and that their personal needs and perspectives need to be set aside when they enter the school. Talk to teachers in the US today and their most common complaint is that students are disengaged, bored, and find much of the school curriculum irrelevant to their lives. The model survives, however, though not uncontested, in most U.S. schools today.

In contrast to Cubberley's (1916) industrial model of schooling, which was the dominant paradigm of the 20th century, John Dewey, first in *Democracy and Education* (1916) and later (when he wished to dispel some of the misconceptions resulting from misunderstandings of that text) in *Experience and Education* (1938), made the case for the democratization of education, with the following key points:

- that democracy is a mode of associated living;
- that learning should be experiential and connect with the needs and interests of the students;
- that inquiry is a key to learning and that problem-posing and problem solving are essential attributes for citizenship in democratic society.

While Dewey (1916) shared Cubberley's (1916) interests in literacy, opportunity, and democracy, his proposed methods of achieving these conditions are diametrically opposed. In Dewey's framework, the process and product are inseparable; achieving democratic ends cannot result from undemocratic means. The full humanization of people depends not upon externally imposed curriculum and management systems, noble in intent though they might be, but rather on responding to the "intrinsic activities and needs... of the given individual to be educated" while excluding "aims which are so uniform as to neglect the specific powers and requirements of an individual" (pp. 107-108).

Dewey (1916) was not a social engineer who believed that social progress was best directed by elites; rather, he equated self-initiated, collaborative inquiry with democratic culture building, and did not accept that this could be carried out through any form of reductionism or standardization. Freedom of thought and selfdirection of inquiry are essential in Dewey's thinking, though he notes that "certain capacities of an individual are not brought out except under the stimulus of associating with others" (p. 302). He believed that misperceived conflicts between the needs of the individual and the needs of society, and between freedom and social control, have resulted in errors in our educational thinking:

It is sometimes assumed, explicitly or unconsciously, that an individual's tendencies are naturally individualistic or egoistic, and thus antisocial. Control then denotes the process by which he is brought to subordinate his natural impulses to public or common ends. Since, by conception, his own nature is quite alien to this process and opposes it rather than helps it, control has in this view a flavor of coercion or compulsion about it. Systems of government and theories of the state have been built upon this notion, and it has seriously affected educational ideas and practices. (1916, pp. 23-24)

Dewey (1927) believed that social control emerges from the fundamental premise that humans have mutual and shared common interests, and that the objective of education should be to foster these habits of sociability. He challenged the philosophical notion of homoeconomicus – the idea that humans are merely self-interested economic actors. Rather, he understood democracy not just as a political process between economic actors, but as a way of life characterized by human association, mutuality, reciprocity, and problem-solving through collective inquiry. Democracy is, he wrote in *The Public and Its Problems*, "the idea of community life itself" (p. 122).

Prefiguring the findings of neuroscience by almost a century, Dewey (1927) was also an early and vocal proponent of the notion that rich experiences, not just book learning, needed to be at the heart of education, and further, that the needs and interests of the learner needed to be taken into consideration if education was to be effective. A careful study of his work reveals a close relationship between this idea of learnercentered, experiential education and the development of deeply democratic communities. Here we have the two overarching values that challenge the supremacy of the idea that education is mainly for economic ends: education for meaningful personal development, and education for social responsibility, sometimes termed education for citizenship. All three are important, but they need to be in balance.

Producing workers for a competitive globalized economy has been the dominant concern of U.S. policymakers for too long now. The current standards movement went into overdrive in the early 1980's with the publication of A Nation at Risk, a national commission report that frightened the American public with dire threats to "our once unchallenged preeminence in commerce, industry, science, and technological innovation" from other industrialized countries. Governors and states got involved and policy makers became obsessed with standards, measurement, and accountability, with little evidence that schools have actually improved, or that there is any demonstrated causal relationship between national learning standards and economic competitiveness.

In the face of this frenzy to maintain preeminence in a global economy, especially in light of the current challenges to a growth oriented, extractive economy presented by the climate crisis, questions arise: How might we design learning environments for all young people that engage them in their own positive self-development, help them to become caring, compassionate and engaged citizens, and provide them with the practical skills to create a sustainable, peaceful and just society as well as prepare them for meaningful work? What ancient assumptions about teaching, learning, knowledge, and the organization of schools need to be consigned to the dustbin of history, so that we might move forward with an educational process attuned to what we now know about the brain and cognition, that makes good use of all of the new technologies available, and which is capable of responding to the scope and intensity of the human created crises we face?

James Moffett, a renowned scholar and educational visionary, in his final book, The Universal Schoolhouse, issued a clarion call for a radically new paradigm for this new era when he proposed that we need to move away from school as we know it and develop in each community "a totally individualized, far flung learning network giving all people of all ages access to any learning resource at any time" (Moffett, 1994, p. xvi). In this, he concurred with Ivan Illich (1973), a radical scholar, philosopher, priest and futurist who first coined the phrase deschooling society," a process that would deinstitutionalize learning and set up in its place webs and networks that would link people who wanted to know something with people who could share their skills or knowledge. Moffett emphasized the urgency of this mission with a call for action:

The many interlocking problems of this nation and this world are escalating so rapidly that only swift changes in thought and action can save either. The generation about to enter schools may be the last who can still reverse the negative megatrends converging today. In order for these children to learn the needed *new ways of thinking*, the present generation in charge of society must begin to set up for them **a** *kind of education it never had and arrange to educate itself further at the same time* (p. xii).

The idea that the time has come for education to be truly "personalized" for students to take ownership of their learning and to break down the walls that have separated school and community, represents a genuine paradigm shift in education. We now have the technological resources we need to enable this shift: all we need is the will to do it and practical advice on how to get from where we are to where we need to be. Educators and communities are beginning to consider what it might mean to no longer strive to fit persons into a standardized system of learning, but rather to fit the learning to the individuals in our society. And not just fit them for economic roles in a competitive globalized society, but fit them for meaningful personal development and a democratic commitment to social responsibility and citizenship.

Vermont, a small mountainous state in a far northeast corner of the US has often been an early adopter of progressive ideas: the first state to legalize civil unions and later, to legalize same-sex marriage without being forced to do so by a court, the first state to require GMO labeling on foods, the first state to attempt to create a single payer health system. It was the birthplace in the US of personalized learning when in 1965, Tim Pitkin, the founding president of a small, rural Vermont college founded on the theories of John Dewey and other early 20th century progressive educators, convened the presidents of nine other liberal arts institutions from across the nation to discuss cooperation in educational innovation and experimentation. They formed a consortium known as the Union for Research and Experimentation in Higher Education (Davis, 1996). This visionary group of educators birthed plans for the "utopian university system" that came to be known as the University Without Walls, a nationwide confederation of undergraduate degree granting programs where students could design their own learning, choose their own teachers, and gain college credit for a variety of non-conventional academic experiences, which might include work experience, travel, volunteer service, political activism, the arts and performance, or spiritual exploration. The organizing concepts uniting these diverse, geographically dispersed programs were the ideas that learning need not be restricted to classrooms, but could happen in the community, that real life experiences, not just the academic disciplines, held value and importance in the learning process, that practicing professionals outside of academic

institutions could contribute significantly to a student's development, and that we needed to find new and more meaningful ways to document and evaluate student learning. In those days, these were truly radical ideas in higher education, which was very much bound by academic tradition. Vermont is both the birthplace and the final resting place (at the University of Vermont) of America's eminent philosopher of education, John Dewey.

The Three Pillars of Personalized Learning

In 2013, this state passed the nation's most farreaching legislation aimed at the transformation of middle and high schools. At the heart of the initiative are three interrelated components: Personalized Learning Plans (PLPs), Proficiency-based Graduation Requirements (PBGRs), and Flexible Pathways to Graduation, which are considered the "three pillars of personalization" (e.g., Bishop, 2019).

Personalized Learning Plans

PLPs identify the unique academic *and experiential* opportunities necessary for individual students to complete secondary school successfully and be well prepared for college or career. Students work closely with advisors (and parents) who help them shape learning plans and curriculum maps that are customized to their interests and vocational plans. The resources of school and community are to be mobilized to assist each student in carrying out their plans.

Proficiency-based Graduation Requirements (PBGRs)

PBGRs replace Carnegie units, mandated courses, and seat time with "proficiency demonstration" systems. Students, parents and teachers collaboratively set individual learning goals that are aligned with "transferable skills," a set of general state standards calling for clear and effective communication, self-direction, creative and practical problem-solving, responsible and involved citizenship, and informed and integrative thinking. It is easy to see the traces of Dewey's contributions to these state standards. Students not only set academic goals, they determine the rate and speed of their learning. Failure is no longer an option, as each individual continues towards mastery at his or her own pace.

Flexible Pathways to Graduation

Flexible Pathways recognizes that there are many different roads towards readiness for college, career, and citizenship in a democratic society. With personalized learning, students are no longer limited to sitting in classrooms, but are free to design their own learning experiences in the community, in collaboration with teachers, parents, and community members. Internships, mentorships, service learning, employment, community-based action research, and participation in arts, activism, and sports outside the school all constitute worthy, creditbearing experiences that can lead towards proficiencies. Online and blended learning opportunities play a part, especially in remote rural areas. Qualified students can partake in supportive and personalized early college and dual enrollment opportunities in which they receive both high school and college credit concurrently and can conceivably graduate from high school with an associate's degree, ready to enter the workforce.

Personalized learning challenges all aspects of the traditional educational model by shifting from a teacher-led classroom to a studentdirected, teacher-facilitated model. This requires major shifts in understanding how students learn, what the role of teachers should be, how knowledge should be organized and accessed, and how learning should be assessed. The power of the 'personalized learning paradigm' is that it calls upon learners to set and attain their own academic and career goals and participate fully in the design of a curriculum of relevance and meaning to their lives, and it calls upon educators to provide the necessary supports and structures for them to succeed in this. I have been researching this initiative for the past five vears, carrying out interviews with current students, graduates, parents, community mentors, and educators. I do not want to understate the challenges and difficulties faced by people attempting a systems change of such magnitude in what are perhaps our most conservative, inertia-bound institutions schools. However, there is also great excitement as people come to understand the reality that our conventional way of educating students discipline-based courses, textbooks, standardized tests, and Carnegie units - is not only inconsistent with what we now know about how people learn, it is an inadequate template for preparing people for the complexity and indeterminacy of the 21st century. A consensus is

emerging in the research about how schools need to change to really engage students and to keep pace with the explosion of information available to us with advances in digital technologies, and a careful reading of these points leads us back to Dewey:

- Students need to be at the center of their learning, with increasing choice, autonomy, and decision-making about what they learn and how they go about it.
- Learning tasks should connect with students' emerging interests, curiosities, questions, and passions.
- Learning should be characterized by interdisciplinary, integrated projects and authentic, meaningful tasks.
- Assessment should be formative, collaborative, and grounded in performances and exhibitions of learning.
- The student portfolio should be a repository of self-chosen work by which the student demonstrates what they have learned and how they have grown.
- Young people should have access to a wide range of mentors, both in the school and in the wider community.
- Advising students, building relationships with them, and connecting them to resources in the community should be as important to teachers' work as curriculum planning and instruction.
- Parents are important partners in the development of young people's learning plans. (Clarke, 2013; DiMartino & Clarke, 2003; DiMartino & Clarke, 2008).

Personalization and the Cultivation of Democratic Community

Dewey was a creature of his time, albeit a visionary creature. He believed in progress, the preeminence of democracy as a superior form of political organization, the role of inquiry in human life, the fundamental sociability of humans, and the faith that people can, through the exercise of intelligence and good will, transform social conditions such as greed, oppression, and corruption into a society of compassion, cooperation and equality. If I may be so bold as to imagine what Dewey would think about our progress towards these goals in the US, over 100 years since *Democracy and* Education was first published, I suspect he would be sorely disappointed. He might generously say that democratization is a work in progress, a vision that has been incompletely realized. Or he might more boldly posit that given the many delusions promulgated by corporate and media propagandists and gladly entertained by too many people in the US - that our planet is 6,000 years old, that climate change is a hoax, that the sun revolves around the earth, that investing in a lottery ticket is sound financial planning, or that former President Obama is a Muslim socialist – that democracy, and in fact, intelligence, are both endangered species. He would be appalled that we had a president who espoused such reactionary ideas as blocking people from entering the US on the basis of their religion and building an unbreachable wall between our country and our neighbor. Mexico. He might wonder why, after 100 years, his profound ideas about education and democracy have not taken hold. Dewey was not an armchair academic after all. He hoped to see his ideas translated into practice, and that these might influence the course of history towards more democratic social practices. Yet his ideas about education, though periodically influential, have failed to seriously challenge the standardized management paradigm. So, what might Dewey have to say about personalized learning, a model with the potential to overturn the entrenched system? What follows are some problem-situations and questions that might merit his consideration:

1) Community Development

While Dewey proposed that the classroom should in every way model itself after the community, the personalized learning movement goes further in that it acknowledges the community itself as the classroom. In order for this to be successful, businesses and the nonprofit sector, as well as individuals with knowledge to share must respond with the resources, skills, expertise, and interest to contribute in significantly expanded ways to the education of young people in the community. I think our esteemed philosopher might applaud the possibility of this robust relationship between the school and society; however, he might note, as he did during his lifetime, that the idea of community itself was a yet unrealized ideal (Brosio, 1972). Scholars such as Robert Bellah et al. (1985) have documented the ways in which our communities are losing their coherence and meaning, and point to

individualism, isolation and fragmentation as root causes of the turn away from participation in public life. With the loosening of the boundaries between school and community, I would hope that a new generation of citizens might become more firmly rooted in community life, and be better equipped to engage in the forms of problem-solving inquiry that Dewey envisioned. In The Public and its Problems, Dewey (1927) stated that "unless local communal life can be restored, the public cannot solve its more urgent problems" (p. 216). And we do indeed face urgent problems. Vermont may be riper for this form of community development than most places, with its small size, tradition of democratic town meetings, thick webs of relationships, and perhaps more shared values than many places in the US. One promising development in Vermont is a process called "community asset mapping" in which schools, communities, and non-profit service providers work together to identify community resources that can aid students in attaining their personalized learning goals, and some teachers are implementing innovative curriculum units that are seamlessly integrated into community life (see, for example, Kesson, 2019).

Question: How can schools and communities forge the kinds of alliances necessary to rebuild "communal life" in ways that enhance learning, provide students a deep sense of connection and belonging, and enable them to make meaningful contributions to public life?

2) Embodied Learning

Personalized learning, to many minds, depends on the increased utilization of digital technology for distance learning, blended learning, and as an organizing tool to track student progress in an individualized system. Dewey had no way of anticipating the Internet, but we can surmise some of the questions he might pose when examining the educative relationship between young people and computers. Just as he subordinated book learning and subject matter to a status below (or at least, complementary to) embodied experience, he might ask if the technology was playing a primary or a supporting role in the learning experience. Dewey (1956) stated that the "map is not a substitute for personal experience. The map does not take the place of the actual journey" (p. 20). I suspect he might worry about the many hours young people now spend affixed to their tiny screens, and propose that their precious

time might be better spent observing nature in the fields and forests, turning their hands to productive craft, cooking, gardening, artmaking, designing buildings, or inventing products (I suspect he *would* appreciate the 3-D printer, however, and advocate for them in every school!) He would surely want young people to critically examine the impact of any technology on the environment, on language and thinking, and on the social world, and would likely support technological innovation only if it enabled young people to participate more fully in the life of their community, and to deepen meaning-making and analysis of their embodied experiences.

Question: How might we determine the appropriate role of technology in the personalized learning paradigm, so that it becomes not **a substitute** for experience, but a **supplement** to it?

3) The Elusive Quest for Equity

Personalized learning is enhanced when the student has access to social capital, networks of human and material resources necessary to support learning beyond the classroom. Wealthier students have more access through family connections and resources to quality internships, travel abroad, music and art lessons, and other high-quality learning experiences that can, in this new paradigm, constitute the "curriculum." Students with their own transportation can more easily travel to community-based learning sites, especially in widespread rural areas. The career and college aspirations of youth are influenced by such variables as race, language, social class, and family occupations. A large question for me concerns how schools can mitigate the opportunity differential between students with enhanced life chances, and those who for reasons of rural isolation, newcomer status, or social class, do not share the same possibilities. Dewey was clear, that, "In short, each one is equally an individual and entitled to equal opportunity of development of his own capacities, be they large or small in range" (in Gouinlock, 1994, p. 266).

Question: How will we equalize the educational opportunities available to all of our young people, so that every student can benefit equitably from enhanced and extended learning experiences? How can we ensure that their advisors, charged with helping students imagine their futures, do not (perhaps unconsciously) reproduce the ascribed social status of young people by employing racial, economic, and/or gendered stereotypes?

4) The Perils of the Personalized Playlist

Personalization, sometimes known as customization or individualization, sits uncomfortably close to an emerging business model which consists of tailoring services and products to accommodate specific individuals. We are in the thrall of personalization when we are targeted with web-based advertisements that appear to know our deepest desires. It is a key ingredient in Internet recommender systems that analyze our preferences through data mining and steer us towards books or films that we may enjoy based on past purchases. It is no accident that two of the largest foundations that fund education, the Gates Foundation, which has invested over 15 billion dollars in education since 2000, and the Chan Zuckerberg Initiative, which plans to invest "hundreds of millions of dollars a year" (Wexler, 2018) are pouring vast resources into personalized learning. Their software-based version of personalized learning is quite at odds with Dewey's vision of deep democracy, as well as with what we know about best practices in education. Aside from its promises to tailor learning to individual needs by creating "playlists" of learning based on interests, this technological "fix" brings a host of problems: isolation of young people from each other and from their communities, privacy concerns, the dehumanization of learning, and the reduction of what is a highly complex endeavor - learning - to its simplest elements. As Chet Bowers so compellingly reminds us (2001, 2017), computer-mediated instruction is not a neutral technology but has profound implications for the development of thinking, the relationships between humans and their environment, and the endurance of face-to-face communities and communication (note the early Latin meaning of the root here – *communis*, things held in common). A software-based, reductionist understanding of personalization might rightly be understood as merely the latest weapon in the arsenal of late capitalism, branding our interests and us in order to squeeze maximum profits out of our desires.

Question: How do we swim against the commercial currents of hyper-individualism and consumerism to ensure that the cultivation of sociability, critical discussion, cooperative learning and collaboration are not pushed aside in the interests of highly individualized pursuits that have no potential social value?

5) New Forms of Tracking

In their rush to ensure that their students are "career ready," some advocates of personalized learning are placing a developmentally inappropriate emphasis on early identification of interests that lead directly to careers. Young people are pushed to identify clear goals before they have had a chance to even explore their emergent interests and curiosities. Aside from the fact that economists and social thinkers are unable to predict the careers that will exist in even the near future, this emphasis on early goal identification (combined, as noted above, with implicit and unrecognized bias) presents the problem of early tracking into life paths that may feel familiar to students, but which do not allow for the kinds of possibilities that arise with wide exposure to multiple and expansive options. Our educational system has long been beholden to the interests of business and economics, at the expense of the cultivation of creative. autonomous, intellectually engaged, and critical learners. Personalized learning should not be in the business of replicating this sort of tracking. And it is important to keep in mind one of Dewey's more famous quotes, from Article II of his "Pedagogic Creed": "I believe that education, therefore, is a process of living and not a preparation for future living" (in Dworkin, 1959, p. 22). If students are highly engaged in the vitality of the present moment, the future will take care of itself.

Question: How can we not become enslaved to the demands of "career readiness" and allow for the free play of inquiry and exploration, so that young people have opportunities to entertain many options for their futures? Beyond this, how can we instill in them a sense of agency that will enable them to intelligently create their own futures?

Schools cannot solve the problems of democracy, and the problems are enormous at this point in our history: what to do about global warming, species extinction, income inequality, human rights, mass incarceration, terrorism, and the many people displaced from their homelands due to conflicts, poverty, or the ravages of a changing climate. Young people are the inheritors of this world we have created, and they have a vested interest in creating a more livable world than we have left them. In my experience, many young people are eager to get to work on these problems, and conventional schooling has not provided them with the outlets they need to exercise their intelligence.

Our model of schooling has been with us for almost two centuries, and mental models are highly resistant to change. School leaders are unsure how to communicate the changes to the stakeholders in their communities; parents are worried that the colleges their children hope to attend will not recognize new transcripts with "proficiencies" listed rather than grades; teachers are worried that their traditional subject-centered roles are becoming obsolete; businesses worry about new (uncompensated) demands on their time, and having the human capacity to respond to needs; school boards are worried that change is moving too fast for their communities, and kids - well, many are totally on fire and enthusiastic about the opening of possibilities, and some are just confused. What does it mean to be "proficient?" How will I be graded? How do I stand in relation to my peers? What if I do not know what I am interested in? While the challenges are enormous, I believe that moving ahead with this experiment in personalized, community-based learning is worth the effort for a number of reasons. First, we need to face the fact that the brick-andmortar concept of school, with its restricted ways of organizing space, time, relationships, work, and the flow of information, is an outdated and inadequate template for learning in the 21st century. Second, it is about time we acknowledged that the standardized curriculum, with its one-size-fits-all approach to learning, does not fit anyone. Third, school reform has been inappropriately weighted toward preparing young people for economic roles. Young people want more from their education than mere preparation for a job. They yearn to find meaning and purpose in their lives, and to make a better world. Personalized learning has the potential to remedy this imbalance with its strong focus on personal development and social responsibility.

But perhaps most important, this approach to teaching and learning could maximize the utilization of the intellectual capital and practical wisdom of our communities, bringing forth as teachers folks who are on the cutting edges of social transformation, whether they be artists, solar engineers, musicians, organic farmers, yoga teachers, community organizers, legislators, computer software designers, or holistic healers. We need to think outside the boundaries that have constrained our imaginations about teaching and learning. In contrast to mainstream trends in education nation states moving increasingly towards national curricula with common standards and rigid systems of accountability - I get excited about diversified, decentralized, localized ecosystems of personalized educational opportunities. Just as small-scale, diversified agricultural systems are more resilient than huge industrialized, monoculture systems, a system of schooling that is responsive to local and individual needs and interests may prove more resilient than standardized, industrial age schooling in the face of the enormous changes bearing down upon us.

We have only to decide that we wish to direct human intelligence towards ends that support meaningful human development, creativity, social justice, and the desire to live in mutually beneficial and sustainable ways with the rest of the planet. We must have the vision to prepare young people to imagine and design the tools and practices and systems capable of responding to our rapidly changing circumstances. Creativity is the new currency, say some futurists. And, given the rapid pace of change, the need for learning will be ongoing and continuous over the span of a working lifetime. But this does not necessarily mean people will spend their lives in school. On the contrary, the successful people of the future will need to be nimble learners, forging their own paths, selfteaching, learning from peers, and networking in ad hoc groups. We have few models for what this looks like, but we need to adopt Dewey's experimental mindset and put our intelligences to work on the problem. We need to rid ourselves of the standardized management paradigm (the legacy of Ellwood Cubberley), so that in its place might emerge a genuine "learning society," in which people individually and collaboratively pursue those things they are passionately interested in, and declare their responsibility to one another, to the greater community of life, and to future generations.

Personalized learning offers opportunities for reaching outside the boundaries of the school walls to foster the capacities and dispositions students need to become active, compassionate citizens. I believe that young people fortunate enough to have such educational experiences are likely to develop an interest in strong democracy, and to be creators of the loving and just society that Dewey hoped for.

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