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The Power of Experiential Learning

By Jonathan Lash

Five years ago when, deeply impressed by the college's students, I agreed to become Hampshire's sixth president and transition from a career in the environmental field, my wife, Ellie, was bemused. She knew very well that even with a master's in education, her husband would face a steep learning curve. After 40 years as a primary school teacher, mostly with 1st graders at the Sidwell Friends School, in Washington, she was excited to share the experience with me.

She has been a wise and patient adviser, as delighted as I am by this college, founded to be an alternative to the lecture-test-grade model. Students here at Hampshire College work with a committee of faculty advisers that they recruit, mixing experiential, project-based studies with seminars and courses to explore the questions that drive them.

Ellie and I often discuss work, and we've realized a connection between student learning in grade school and college. Some people may find it difficult to imagine a connection between anything about 1st grade and higher education, but the relationship is obvious in the most fundamental and instinctual form of learning: the power of experience, of learning by doing. But providing experience is not the same as providing information.

I wish schools at every level did more to enable teachers to create opportunities for students to practice experiential learning—a model critical for our world as the pace of change accelerates. Its results cannot be captured on a standardized test; in fact, it stands in opposition to standardized teaching to a test, because at its core are innovation and invention.

In Ellie's experience, one of the most effective lessons for her 1st graders was when they would undertake an immersive, weeklong lesson of designing and building a model of a zoo with blocks and crafts. The students were so immersed in experimenting and creating that she would easily guide them to learn lessons from her curriculum, including biology, math, language arts, writing, reading, technology, and social studies, not to mention the practices of inventing, collaborating, and problem-solving.

[← Back to Story](#)



The R. W. Kern Center at Hampshire College, which opens this month, is already being used as a site for collaborative work between students and professors. —Dave Roback/The Republican of Springfield/AP

A group of Hampshire students have undertaken their own building project on campus this year: They have been learning science, math, and technology by performing labs tied to a major campus center we're constructing. The college will soon dedicate a "living building" to meet the most advanced, sustainable green-building standard in the world. Designed as a teaching tool, the R.W. Kern Center will produce its own energy, harvest its own water, treat its own waste, and contain no toxic materials. More than a half-dozen of our professors have actively integrated the building's advanced systems into our curriculum this year.

This past fall, a group of Hampshire professors—a microbiologist, a hydrologist, an ecologist, and a mathematician—collaborated to develop tutorial seminars enabling Hampshire students to model the living building's waste-treatment systems. Proctored by the professors, the students led one another through labs in which they built simulated, constructed wetlands in test bins, and then poured a simulated gray-water stew of vinegar, milk, coffee, toilet paper, and other substances through their test wetlands to mimic what the building's wetlands will filter and treat daily. From their findings, they worked with professors to develop mathematical models of the system. Not open yet, the building was already teaching. The techniques were sophisticated, but the approach was the same: experience, experiment, model, reflect, learn.

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Most of the students in these seminars had not enrolled here to study science or math. But to complete the lab, they had to learn principles of biology, hydrology, and calculus. They learned these skills naturally, and, in many cases, unknowingly, because they were excited and challenged by their work.

As a lifelong environmentalist, I am heartened when students study their school buildings to learn lessons on the use of resources, sustainability, and conservation. Learning by doing can be profound at any grade level. There's plenty of evidence that experience **results in the kind of learning that students of any age build on and use.**

This model of education also spurs innovation. For instance, collaborative research and mathematical models by our professors and students on the ins and outs of energy, water, and waste streams in living buildings will provide architects, scientists, and engineers with essential information on this new technology, with implications far beyond our campus. And we, at the college, see evidence that this experiential-based model is working: Hampshire ranks in the **top 2 percent of U.S. colleges by percentage of alums who earn doctorates**, according to the National Science Foundation, and No. 6 on Forbes' list of colleges with the most entrepreneurial alums.

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Why is this model of immersive, experiential, student-driven, and project-based education important, across grades, from preschool through college? Most of today's students will end up in jobs that haven't yet been invented. They can be empowered to learn to invent, question, adapt, create, and collaborate with gritty resilience. Students engaged through experience become inspired, self-motivated, and resourceful as they learn to drive their own learning. It may start with blocks, but it lasts a lifetime.

Jonathan Lash is the president of Hampshire College, in Amherst, Mass. Previously, he served as the president of the World Resources Institute; the chair of President Bill Clinton's Council on Sustainable Development; and the secretary of natural resources in Vermont.

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