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**FEATURED ESSAY  
OF PLACE AND EDUCATION**

**Swimming Upstream Against the Current: Changing the School Improvement Paradigm**

By DAVID SOBEL

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**A Different Approach to School Improvement**

Crellin Elementary School in Oakland, Maryland sits hard-by the West Virginia border. It's a forgotten coal-mining community with an abandoned rail line running through the middle of it. The small school serves about 100 students, 87 % on free and reduced lunch. The parents are coal miners, truck drivers, farmers, tradesmen.



Dana McCauley, Crellin's teaching principal, (photo just below) is driving me through the school's immediate neighborhood. The neglected Community Building has a section of

collapsed roof, rotten stairs, peeling shingles. The houses have flaking paint, ripped off trim boards, broken windows. "One of the students lives in that trailer back there," she points. The yard is scattered with broken toys, car parts, an old refrigerator, a wind-tossed tarp, moldering insulation. Drug and alcohol abuse are problems for some local families. It fulfills all your stereotypes of a hard-luck Appalachian community.



Which makes the story of this school so much more provocative. The fifty-year old school building, low slung and hunkered down only a stone's throw from the abandoned Community Building, is tidy, well-kept and welcoming. It's the new center of the community. Inside the bulletin boards bristle with pictures of smiling children on a sledding trip to the bus-driver's farm, historic photos of the sawmill that used to occupy the school site, student designed brochures about the

American Chestnut, a healthy snacks project, and a map of the Environmental Education Laboratory.

An amazing transformation has happened at Crellin over the past eight years. This is school change at it's best. And yet Crellin's principal, staff, students and community have been swimming upstream against the dominant No Child Left Behind paradigm of direct instruction, time on task and "drill, baby, drill" as the only ways to increase academic achievement. To be sure, Crellin students and teachers are under the same pressure to increase test scores and meet Annual Yearly Progress. But they've done it through adopting a place-based education paradigm that reaches far beyond the narrow scope of just raising test scores. Instead they've implemented a program that,

*\*engages students in rigorous work that develops academic skills*  
*\*insures the development of civic engagement skills in students and teachers*  
*\*engages parents, community members and businesses in the life of the school*  
*\*designs programs that engage students in solving community problems and improves the quality of life and the environment.*

(Barsch and Sobel, Democracy and Education, 2006)

The principal, teachers and parents of Crellin Elementary are proving that school improvement can be rigorous and joyous, indoors and outdoors, heady and heartfelt. There is, indeed, more than one way to skin a cat.

### **My Way or the Highway**

Ever since the widely hyped A Nation at Risk report (1983) argued that student school performance in the US did not measure up to student performance in our overseas competitors' classrooms, the pressure has been on to improve American schools. Out of this concern, the accountability and state standards movement emerged which led to the No Child Left Behind legislation that implemented widespread student testing and school evaluation. The underlying assumption of the reform methods spawned by this legislation is that fear of failure and institutional censure will lead teachers to do a better job and students to study harder.



*"Nearly everything about the No Child Left Behind Act is punitive in nature. Schools are held up for public scrutiny and then derided in the press for their inability to meet goals set by others. Teachers are condemned by their administrators if their students do not display "annual yearly progress," and administrators are fired or moved to less desirable buildings if their schools consistently fail to measure up."*

(Smith and Sobel, Place- and Community-based Education in Schools, 2010)

As a result, the goal of schooling has become to increase test scores. Everything else falls away. And the widely held, yet problematic, assumption is that the only way to accomplish this is through direct instruction and time on task. All teachers are required to use the same curriculum materials and not diverge from what's specified in the teacher's guide. There must be 90 minutes of literacy instruction and 90 minutes of drill and kill math work each day. Integrated curriculum and project-based learning are discouraged because they don't efficiently target skills that will be tested on the state exams. Recess is sacrificed, art and music are jettisoned, mindless worksheet homework is increased. The principal conveys the message that *"It's my way or the highway."* If teachers won't teach to the test, then they won't be teaching there any more. The

results—test scores inch up, boredom reigns, and more than half of American students find school meaningless.

There is another way. Place-based education proponents have different assumptions about the nature of human learning and school improvement. Rather than assuming that learners are motivated by external controls, teachers focus on engaging students with the real nearby world and aspire to lighting the flame of curiosity. Teachers offer students purposeful activity, social membership and opportunities to develop competence. The nearby neighborhood and social community become the classroom and source of

curricular challenges. As the Crellin teachers and principal wrote in a recent grant application,



*“The school walls of Crellin Elementary have been taken down as the schoolyard and community have become permanent fixtures in the instructional landscape. Therefore, instruction does not only occur in the traditional classroom. Studying the history of the community as a context for understanding natural resources is an example of how Crellin Elementary School utilizes place-based instruction that is both meaningful and relevant to students’ lives. Problem-based activities give students experience in conducting research, using higher level thinking skills, and working in cooperative groups.”*

*Classroom instruction is also content interrelated. During a fifth grade math class on area and perimeter, students create the space outdoors for the new Stewardship Garden. Students write and publish books about the Environmental Education Laboratory (EEL) for younger grades. These publications include information about components of the EEL such as the water treatment ponds, wetlands, boardwalk, vernal pool, Snowy Creek, and native gardens. They create field guides, write newspaper articles, and demonstrate their knowledge artistically.*

(Panasonic National School Change Award application, 2009)

Schools dominated by the NCLB/Direct Instruction mindset see this approach as inefficient, messy and counterproductive. Principals in these schools want to see “*children in their places with nice, shiny faces.*” There’s a teacher in a New Hampshire elementary school who I have long respected as one of the best elementary school teachers in the state. She actively engages students in mapping the local nature area, producing school plays, collaborating with the town library. She teaches graduate courses in project-based learning and arts integration. And she’s being squeezed out of her job by the new principal because she won’t follow his new direct instruction rules. This, despite the fact that her students always perform well on the state curriculum assessments. Why is it so hard to accept that there are diverse forms of effective instruction, many ways to skin a cat?

### **Do You Eat the Deer Jerky?**

I got a glimpse of Dana McCauley’s leadership style when she told me the story of how she hired the school secretary who also serves as the public face of the school. This is an important position in a small school because the secretary is the initial point of contact for parents, school district administrators, and community leaders. This person needs to embody the values of the school.

*"I heard you talking with Dillon on the bus about hunting. All these kids hunt and most of the families, process their own venison, and freeze it for the winter. For lots of families, it's a necessity, a family budget strategy. Dillon proudly came in earlier this year with some deer jerky his dad had made. He reached into his pocket, pulled it out with his grimy hand and reached it out to me. It had probably been there for a couple of day, was covered with lint. And I ate it. I had to eat it, to show I respected him and his family."*



*Then it was a month later and I was hiring a new secretary and it was down to two people. The secretary's an important person in the school. She's the public face, the first line of interaction. This person has to be on the same page as me. Has to want to connect with and respect each and every child and parent. They were both good candidates and I was trying to come up with a way to decide between the two of them. So I presented this challenge. I asked, 'Say Dillon comes in and reaches into his pocket and offers you some deer jerky, speckled with lint. Do you eat it?' One of the candidates said, 'Absolutely not.' The other said, "Yes, you have to." I hired her. She was on the right page."*

This story captures one of those ineffable aspects of what makes a good teacher and school leader, and what leads to constructive school change. The leader genuinely respects each child and knows that each parent and family can contribute to enhancing the learning environment of the school. The school leader reaches out to find community partners, connects parents with social services, creates opportunities for parents and teachers to learn together. From Vicki Fenwick-Judy, the environmental educator at Canaan Valley Institute, to Clayton, the bus driver who has sledding parties at this house, to Dr. Pope, the retired doctor and ornithologist who does bird research with Rebecca Sanders' 5th graders, to Gary Yoder from the Maryland Department of Natural Resources who orchestrated the acid mine mitigation project, Dana and the teachers have learned to access the plethora of learning resources available everywhere, even in a worn out coal-mining town.



#### **" Why is That Water Orange?"**

In the beginning, at the dawn of the 21st century, Crellin was a tough little school. Tests scores were below the state average and if there was a fight at the high school, it was often Crellin kids. Dana recalls, *"When I became principal, lots of people said to me, 'You don't want to send your own kids there. But I had to, and having my kids here helped me connect with the parents and community."* There wasn't a lot of hope at Crellin. But with a shift in attitude, and in pedagogical approach, the school started to change. Vicki Fenwick-Judy of the Canaan Valley Institute over the border in Davis, West Virginia, was one of the first partners involved in helping the school implement place-based education pedagogy. She helped provide the metaphor that changed the paradigm.

*"In 1803, Congress appropriated \$2,500 for a visionary plan of President Thomas Jefferson's that would become one of America's great adventure stories. Jefferson's plan was for a small expeditionary group to explore the uncharted American West. The group of explorers was called the Corps of Discovery, and was*

*led by Jefferson's secretary, Meriwether Lewis, and Lewis's friend, William Clark. Two-hundred years later, students at Crellin Elementary School in western Maryland founded the Crellin Corps of Discovery whose mission was to embark on a Lewis and Clark-inspired exploration of their own."*

Crellin Elementary's exploration began at an academic summer camp during the summer of 2003. This camp was designed to focus on science standards and content that emerged from the schoolyard and community's natural environment. During a walk behind the school, students discovered tinted water seeping into nearby Snowy Creek and one asked, "*Why is that water orange?*" Taking the question seriously, teacher Rebecca Sanders went to the principal and the principal sought help from the Department of Natural Resources and the Canaan Valley Institute. They discovered that the six acres between the school and the creek had been a coal tailings dump during the early 20th century and that the orange water was acid mine drainage—water that was absorbing acids from the coal waste that was then polluting the Snowy Creek. The Crellin staff realized that something needed to be done and that the doing could possibly make for valuable curriculum.

That initial question reverberated throughout the community, county, and state as residents, volunteers, and agencies got on board and garnered over \$150,000 in funds and over 1000 volunteer hours to do much more than abate the acid mine drainage that was flowing into Snowy Creek. The Corps, as it became known, was an association of students, teachers, community members, nonprofits, and state and federal agencies committed to protecting the natural resources of Crellin and engaging students in meaningful learning opportunities.

This springboard event started the school on its pathway to innovative and engaging curriculum. The restoration of the coal tailings dump turned into an opportunity to create an Environmental Education Laboratory, complete with a marshlands boardwalk, an outdoor classroom amphitheater, and improved access to the creek for water quality studies. With support from Canaan Valley Institute and other community organizations, this project was followed by an oral history project that led to the creation of a history-themed playground. More recent projects have included a Bird and Butterfly Attractant Garden, and a project to help preserve American Chestnuts.

Dr. Pope, the retired physician/ornithologist, has helped to create a bird research sanctuary just outside the windows of the 5th grade classroom. In this same classroom, the teachers and students raise trout in a large, refrigerated tank. When I ask Kirk, a 5th grade student, what he likes about going to Crellin he says, "*I like raising trout, that we get to be outside a lot, and that we get to learn how to fly fish later in the spring.*" I ask why the aquarium has to be covered and he replies knowledgeably, "*To keep it cool, because trout need cool water and to keep it dark, because that's how it would be down in the stream where they hang out, in little dark shallows.*"

Eventually they get to participate in the stocking as well. During one of the past stockings, DNR's Western Region Fisheries manager Alan Klotz commented, "*This was the happiest fish stocking I've ever witnessed. The children have been studying the environment for months, and have been involved in the site reclamation from the beginning by picking up garbage when the project started, right up to today's stocking. Now they're actually getting some hands-on experience with restoring the stream, and they're very excited.*"

This is school change as it should be. Children engaged in rigorous curriculum based on real environmental and community challenges. Teachers working hand-in-hand with local scientists and historians. Parents volunteering after school, during school vacations and on weekends to bring students to conferences, work on school projects, restore the creek. In the process they're not just preparing for the state tests, they're improving the quality of life in the community and they're learning the benefits of civic engagement.

## On the Right Page

What's the moral of this story? This excerpt from a Baltimore Sun article says it all.

### Garrett County school ranks No.1 in test scores

#### **Crellin Elementary had a pass rate of 100 percent, Benfield in Arundel was No. 2.**

July 22, 2010 By Liz Bowie, The Baltimore Sun

The best elementary schools in the state come in all sizes and areas, from a small school filled with low-income students in the far reaches of Western Maryland to a midsize one in a wealthy neighborhood of Anne Arundel County.

Of the 874 elementary schools in the state, Crellin Elementary, a schoolhouse nestled in a coal mining area that has amassed a collection of prizes for leadership, environmental teaching and character education, is the school with the highest pass rate on the Maryland School Assessment.

With an average 100 percent pass rate, the 100 students at Crellin edged out Anne Arundel County's Benfield Elementary, a school whose students live in neighborhoods along the banks of the Severn River.

The differences in achievement between the top 10 schools was tenths of a percentage point. All had more than 98 percent of their students passing the state test. The principals describe there is much that is similar about the schools.

Principals said they are serious about teaching students, but just as important is raising children to understand what it means to be productive citizens and caring for their social and mental health. Principals also emphasized the strong support from parents who will go to great lengths to help the schools.

*"We have really opened up the school and taken the walls down so the whole community becomes the school,"* said Dana McCauley, principal of Crellin. *"Our parents are one of the most valuable tools we have. They will roll up their sleeves and do whatever we ask them."* That includes building a playground that incorporates vestiges of the town's history.

Number One elementary school in Maryland! Think about that for a minute. Sure, there are all those Baltimore schools, you've seen them depicted in *The Wire*, where drugs and gang violence take their toll. But there are also all those lily white schools around Annapolis and in the DC suburbs, where the average family income is twice or three times what it is the Crellin community. Doesn't this mean something unusually right is going on here?

It's not surprising if you look at the changes in the test scores over the past eight years. (See attached file). Since 2003, when McCauley became principal, there's been a gradual, progressive decrease in the percentage of children scoring at the basic level and a gradual increase in the percentage of children scoring at the proficient or advanced level. Keep in mind that these are, for the most part, economically disadvantaged students, and there's the normal amount of special needs students in the school. This community is not exceptional in any demographic way. What's exceptional is the comprehensiveness of the place-based pedagogical approach and a principal and teachers who believe that authentic, engaging curriculum is the key to school success. Drill, Baby, Drill might be a good mantra for off-shore oil enthusiasts, but it's an impoverished mindset for good school reform.

We've been seeing this same pattern emerge over the last decade. The Place-based Education Evaluation Collaborative, the North American Association for Environmental Education, the Rural School and Community Trust and Expeditionary Learning Schools have all been collecting data on the relationship between place-based/project-based learning and student academic achievement.

For instance, Oksana Bartosh conducted a five year longitudinal study of 77 demographically paired schools in Washington state. One school in each pair was systematically integrating environmental education across the curriculum; the other school in each pair was not.

*"According to this research, schools that undertake systemic environmental education programs consistently have higher test scores on the state standardized tests over comparable schools with 'traditional' curriculum approaches....Overall, 73 pairs out of 77 project schools had higher scores in at least one subject."*

(Bartosh, Environmental Education: Improving Student Achievement, 2004)

At Antioch University New England, we worked with the Beebe Environmental and Health Sciences Magnet School in Malden, MA for five years providing extensive professional development and training in place-based education pedagogy. Over the course of those five years, we found similar increases in science and math test scores as a result of the changes in instruction. The changes were significantly greater than at other magnet schools in this inner city urban school district. Expeditionary Learning Schools have had similar results in many of the more than 160 schools they work with around the country, many in inner city school districts.

Principals and school board members often say to us, *“Yes, this integrated curriculum and place-based education approach looks like fun, but we just can’t waste our time on that, we’ve got to meet Annual Yearly Progress.”*

We reply, *“Well, if you’re serious about meeting Annual Yearly Progress, and you want to raise test scores while also educating the whole child, encouraging civic engagement, and making the world a better place, you should consider implementing place-based education.”*

But the Direct Instruction/Time on Task paradigm is a powerful one, difficult to dislodge, and it sometimes yields modest, satisfactory results. But at what cost? At the cost of turning many students and teachers off to education. At the cost of sacrificing the opportunity to turn schools into, as John Dewey said, *“laboratories for democracy.”* At the cost of extinguishing the gleam in their eyes.

### **What Other Community Would Do That?**

I’m in Rebecca Sanders classroom in Crellin. She and Dana McCauley have been showing me the school after their students had done a presentation on the American Chestnut project at the West Virginia Environmental Educators Conference. Rebecca is peeling back the sheets that keep the trout aquarium dark and cool so we can see the fry. She recalls a winter storm story.

*“Remember that night that the power went out and we’d only had the trout fry for a couple of weeks. Without the power, the aerator and the chiller wouldn’t work. We were concerned the trout would die and the students would be heartbroken. We called up Dave Browning, a county maintenance worker and got him to bring over a generator so we could keep the aerator going. We were joined by JR, a parent, and his daughters who had called Dana and rushed to the school to check the fish. But we were still concerned about the water temperature—it needs to stay between 50-54 degrees. So Dana and I slept on two cots, sharing one blanket between us. We almost froze to death ourselves. But we kept those fish alive. What other principal would do that?”*

What other principal, or teacher, indeed? But the truth is that at Crellin, they’ve *“taken down the walls of the school, so the community has become the school.”* The more appropriate question might be, *“What other community would do that?”* Crellin is a story about how a principal and teachers have learned how to engage Canaan Valley Institute, parents, the Department of Natural Resources, various local colleges, the Youghiogheny Watershed Association, the historical society, the Girl Scouts, in improving their school. Let’s change the paradigm so that it’s acceptable for schools to swim against the NCLB current in working out viable, place-based approaches to school improvement in their communities.