

A Town Turned Classroom: How a Focus on Farming Saved a Rural Kansas School

BY SUSAN HEADDEN

» The town of Walton, Kan., cuts a modest swath through a rich carpet of winter wheat that stretches in green and amber patches toward the Flint Hills. It is at first glance a forlorn-looking place, characterized by faded bungalows and corrugated garages, and dwarfed by the concrete tower that is the Mid-Kansas Cooperative Elevator. Named after one of the original investors in the Atchison, Topeka and Santa Fe railroad, Walton still sees locomotives bullet through town, sounding their whistles and pulling mile-long chains of freight. Along with U.S. 50, another vital artery, the railroad is a reminder that no matter how quiet its main street or stark the horizon, tiny Walton, population 235, is very much connected to the wider world.

Another reminder is a very special elementary school.

The Walton 21st Century Rural Life Center, which bursts out of a low-rise brick building where the town meets the fields, began as the Walton School in 1934 and for years followed the traditional rural model: it educated students from kindergarten through the 12th grade and graduated classes that were often no bigger than 20. As is so often the case in rural communities, the school was a powerful magnet for civic life. But then hard times hit Harvey County. As economic opportunities declined, young people moved out, leaving the school with more and more empty desks. Year after year, the tiny school survived efforts to close it, until 2005 when the Newton School District, to which it is attached, seemed ready to shutter it for good.

Walton's remaining 70 students were welcomed to Newton's in-town schools. But as many local people saw it, the Walton school was the only thing standing

between their community and a future as a ghost town. So in 2007, inspired by Newton's then-superintendent, and with a grant from the federal government, the district reconstituted Walton as a K-4 charter school with a novel curriculum of hands-on learning that is entirely focused on agriculture. One of only two such elementary schools in the country, Walton, which now has 170 students (it pulls from outside the district), is considered an unqualified success. It scores in the top 5 percent on the state's standardized achievement tests; it has been celebrated by the U.S. Department of Education; and educators come from across the country to learn its secrets. The school is so popular that its waiting list, now at 40, extends as far out as 2015. Some parents try to register their children while they are still in the womb.

Educational achievement in rural America is one of the country's great overlooked challenges. Rural students achieve below the U.S. average on national tests, and high school dropout rates are higher and college attendance lower than they are in cities and suburbs. When the U.S. Department of Education asks low-achieving schools to be turned around, rural educators usually say they lack options: schools in many communities can't be closed because there are no other choices, and populations are too thin to support charter schools. But the Walton Rural Life Center, serving a population that has many of these problems, shows that there is genuine promise for rural charter schools—if, like Walton, they have the will and the imagination to try new approaches and to take advantage of the unique strengths of their communities.

LEARNING FROM DAILY LIFE

Natise Vogt is Walton's warm, energetic, straight-talking principal. She ushers guests into her pleasantly cluttered office, past a neat line of chore boots and work gloves that serve as a sort of informal school uniform.



Her view takes in a barn, a greenhouse, and a windmill. But Vogt makes her first point clear: Walton is not out to produce the next generation of American farmers. The focus at the school could have been anything at all—transportation, computers, art, food. What matters most is that the content serves as an engaging vehicle for conveying the information that needs to be taught. Walton picked agriculture for three simple reasons: kids love it, Kansas is a farm state, and as it turns out, there is almost nothing in elementary education that can't be explained by relating it to cows and plows.

Take eggs. If second-grade teacher Staci Schill were running a standard classroom, she would be drilling her students on double-digit addition with the help of a prescribed textbook. There is still some of this kind of instruction, but building lessons around the agricultural theme lets kids see how they use their math facts in daily life. In this case, the students sell eggs produced by a small coop of hens. Every morning they rush out to collect and wash the eggs, inspect them for cracks, and box them for sale for \$2 a dozen. (They recently bought a sheep with the proceeds.) The students learn not just how to tell the difference between a Delaware Blue and a Rhode Island Red, but also about profit and loss and, when the chickens don't lay enough to meet projections, supply and demand.

Walton kids take their rulers and protractors to everything from tractor tires to goat horns. They learn their ounces, cups, and pints by measuring grain for animal feed and oats for granola. Math and science come alive with trips to the grain elevator and a cruise inside a modern tractor, complete with GPS. The fourth-graders recently made a mockup of a wind turbine, learning about things like torque and the behavior of different blades. And on a recent farm visit, they watched rapt as a veterinarian did a sonogram on a cow. Meanwhile, in the school's prairie garden, native Kansas plants prompt lessons about soil composition, weather patterns, and ecology. The fourth-graders are growing

hydroponic vegetables; while in a more traditional greenhouse, others are tending seedlings of tomatoes, peppers, and herbs.

What Walton is doing with its unorthodox curriculum is taking an approach to learning that teachers have long embraced piecemeal—by engaging their students in poster-making, science projects, and the like—and institutionalizing it across topics and grades. Teachers focus on a specific problem or challenge, which encourages students to ask questions, think for themselves, and conduct research. The activities promote teamwork, which in turn brings out leadership skills. Students are being taught all the fundamentals they need to know—the agriculture focus is expanding rather than limiting—but they are getting them in a way that builds curiosity and sticks with them. “It's just making learning real,” Vogt says. “You'd be surprised at how many ways you can tie things together.”

Hands-on, or project-based, learning is hardly a new concept. It was in the fifth century B.C., after all, when Confucius is said to have observed, “When I read I forget, when I hear I remember, when I do I understand.” The approach has been in and out of vogue since the 1930s when the educational philosopher John Dewey said that instruction was more effective when it was grounded in student interests, knowledge, and experience. Hands-on learning enjoyed a revival in the 1980s, before the arrival of the accountability movement that has emphasized test scores. Many continue to advocate it as a way to improve sagging achievement in math and science, as well as to promote the higher, deeper learning that is the goal of the new Common Core State Standards.

Although there has not yet been a large-scale study of the effects of hands-on learning, a number of smaller ones have generally spoken to its benefits. In 1983, an analysis of 57 studies by Ted Bredderman of the State University of New York at Albany showed that students



in activity-based science programs performed up to 20 percent better than did groups using traditional approaches.¹ Students from disadvantaged backgrounds derived the most benefit, he found, and the greatest gains for all students occurred in the areas of creativity, attitude, perception, and logic. More recently, a 2000 review of the research by John W. Thomas for the Autodesk Foundation showed that students learn better when they are put in active roles as problem-solvers.² And according to the Intel Teacher Program, project-based learning leads to increased self-reliance and personal responsibility, improved attendance, and better attitudes toward school.

But there is good reason for the dearth of project-based curricula like Walton's. In the hands of weak teachers, it can be disastrous. Projects that are ill-conceived or unfocused can easily go off the boards, at best wasting class time and at worst misleading students. And depending on the teacher and the subject, it simply may not be the best way to teach: students can often master information faster when they get it from an authoritative source than when they try to find it themselves. In a 2010 study, researchers Guido Schwerdt of Harvard University and Amelie C. Wuppermann of the University of Mainz in Germany looked at the same eighth-grade students with two different teachers using two different teaching strategies—one hands-on, the other lecture-style. In an unexpected result, they found that the lecture-style presentations were associated with an increase, rather than a decrease, in student achievement.³

TEACHABLE MOMENTS

Without question, hands-on teaching is more challenging than lecture-style teaching or other modes of instruction, requiring more and better planning and considerably greater flexibility on the part of everyone involved. "It's not the close-your-door-and-plan-on-your-own kind of planning," says Nancy Waymack, managing director for district policy for the National

Council on Teacher Quality. "These are efforts to bring learning across the curriculum that wouldn't be natural in a standard class. All the teachers have to agree on the focus and individual standards. Just the whole structure is different from the beginning, and it requires you to think out of the box."

It perhaps goes without saying that some teachers are better at this type of instruction than others. Teachers, Waymack notes, "have different levels of comfort. A participatory style may work better for some than for others." The type of student matters, too. Some struggle to come up with questions, some follow unproductive paths, others have trouble synthesizing their work with that of others. Such handicaps, says Thomas in his literature review, suggest that the effectiveness of project-based learning "may depend, to a greater extent than we recognize, on the incorporation of a range of supports to help students learn how to learn."⁴ And the approach may benefit some student populations more than others: Just as Bredderman's research found greater benefits of hands-on instruction for less advantaged students, Schwerdt's and Wuppermann's findings suggest that the connection between lectures and high achievement was strongest among wealthier students.

Walton has faced all these obstacles to hands-on learning, starting with doubts and misunderstandings about the concept, and of the agricultural focus, in the first place. (Even Vogt herself admits she needed convincing.) Critics have suggested that Walton has deviated from required standards of curriculum, that the agriculture focus crowds out other topics, and that farming is a topic insufficiently lofty to deserve exclusive focus. "They thought that farmers were rednecks and hicks rather than the savvy business people they are," said one teacher, who declined to be named. Still other district officials were under the impression that agriculture was simply being added to the curriculum rather than integrated with it.



But by all accounts, Walton is staffed with unusually talented and creative teachers who have committed to the model—and some who came here because of it—and to doing whatever it takes to make it work. “I don’t know how to explain to people how much extra time and effort the principal and the classroom teachers put into what happens in this building,” one teacher told researchers at Wichita State University who studied the school. Vogt says the teachers do considerably more planning than they would with standard curriculum, and the school’s professional development, which includes summer conferences, often ignores the district’s template in favor of development tailored to the school. The teachers need every minute of it: they must design original lessons that find ways to use the specific to tell the whole, and they rarely have a road map. “We kind of make it up as we go,” Vogt says.

A typical lesson, Vogt says, began when a third-grader brought in a snake he had shot with his BB gun. The teacher took it from there. After determining through research that the reptile was a harmless kingsnake, the children studied its range and habitat. They measured the diameter of the snake coiled up and the length of it fully extended. They noticed a bulge inside it, and based on what they had read, hypothesized about what it might be. Anticipation high, they cut open the snake and discovered a mouse. They concluded the lesson by writing about the experience, citing evidence from what they had seen and read. “Now,” says Vogt, “how much more interesting is that than asking them to write about what they did over the weekend?”

The key for teachers is to adjust to teachable moments. Says one: “If my student comes in and says ‘I found this cool bird, I think they are around here, I see them on the bus,’ then I want to research that bird, and I have to be flexible to do that outside of my 90-minute reading block.” Collaboration is essential. “There is an understanding that if we are in the middle of a big project, we are writing, we are using our math skills,

and we may need two hours of that day—or four hours of that day—to work on the project,” says another teacher. Special education teacher Johanna Hein admits that this kind of scheduling, if one could call it that, can be trying. “I used to have my own room and a set schedule, and now it’s a nightmare,” she says. “It’s chaos all the time. I want to pull a student in for math help, for instance, but he’s out in the barn. There are people everywhere, everyone out doing something different.” If it sounds like Hein is complaining, she isn’t. It may be chaos, she says, but it’s a good kind of chaos.

Given the free-for-all environment, Walton teachers must go the extra mile to ensure that the unconventional lessons and their erratic schedules align with conventional academic standards. They need to implement systems to make sure that those standards are being met, as evidenced by achievement on state tests. (On the state reading test, 56.5 percent of Walton’s fourth-graders scored “exemplary,” compared to 33.3 percent for the Newton district overall and 30 percent for the state.) That means constantly checking for understanding, frequent formative and benchmark assessments, and a few days of practice for the yearly state assessments. One benefit of hands-on learning is that the projects themselves serve as effective demonstrations of what students know.

Surprisingly, all the teachers at Walton needed to bone up on agriculture. It doesn’t matter that almost all of them are from Kansas; they were no more prepared to talk about farming than a teacher from suburban New Jersey. What they do know is that agriculture and education have long shared a deep connection. When most Americans lived in rural communities, students routinely did chores on the farm, and even the academic year was determined by the cycles of planting and harvesting. As the farm population began to shrink, the agricultural emphasis did, too. Those teachers who continued to incorporate agriculture taught it as an occupation rather than as an integral part of life. But



some educators resisted the changes; they recognized the intersection of farming with environmental issues like clean water, healthy forests, and wildlife conservation. In the 1980s, their efforts led to the creation of the USDA's Agriculture in the Classroom program. "Ag in the Classroom," its conferences and materials, now serve as valuable resources for Walton teachers.

SUCCESS WITH SPECIAL NEEDS

There are other throwbacks here to the one-room schoolhouses that once dotted the Plains states. Because of high demand, three of Walton's classes are split, meaning one teacher has to teach a class with students of two different grades. This arrangement can be hard on the teachers, but Vogt says, "I hate turning away kids." Besides, she says, "It's wonderful to see the older kids helping the younger kids, helping them with vocabulary and things like that." In a further departure from the modern routine, students at Walton stay in the same homeroom from kindergarten through fourth grade. That means that they will always have at least one teacher who watches them grow, and will spend time every day with children of other ages. The homeroom teacher serves as an extra parent, the classmates as a sort of extended family. One frequently asked question: "What's up at home?"

One striking thing about Walton is how many students with learning disabilities it attracts. It has counted as many as 25 percent of students with disorders like Asperger's syndrome and attention deficit hyperactivity disorder, compared to about 13 percent for the district overall. The school didn't set out to serve this population particularly, and Vogt said that she and the teachers often didn't know students had special needs until after they showed up; in some cases, she says, parents didn't disclose the information—such was their desire to place their children at a school so well-equipped to help them. And who could blame them, Vogt asks. Children with disabilities tend to be tactile,

or kinesthetic, learners; they need to move around and touch things for a lesson to sink in. Doing projects allows them to be active, as well as to demonstrate success on small tasks. The school's open environment benefits these children, as well. Special needs kids are routinely pulled out of class for extra help, and some can be scarred by the process. But at Walton, all the students are in and out of their classrooms all the time. "They know they have a disability," says Hein, "but there is not the same stigma here."

The high concentration of special needs students initially caused some teachers to worry that Walton would be perceived as a last resort for students who couldn't succeed elsewhere. And some parents of mainstream pupils feared the bar for their kids would be lowered. Vogt, who has a background in special education, insists that success for special needs kids hasn't come at the expense of others. On the contrary, she says, what is good for these children happens to serve mainstream students just as well, if not better. While hands-on projects clearly engage tactile learners, they also engage students who are auditory learners, who can talk about what they are doing, and visual learners who can see creations take shape. Moreover, students who are quick studies can act as leaders for children who are slower to catch on. Hein says, "They can work with a group and find their strength and take the lead." Still, Vogt concedes that the increase in special needs students is an issue "that is going to have to be addressed."

REALITIES OF RURAL CHARTERS

As a charter school in a rural community, Walton stands apart in another essential way.

Overall, one in four students in the U.S. attends a rural school, and contrary to popular assumptions, K-12 enrollment in rural areas is growing.⁵ Although the population of rural America skews old, and while 30- to



50-year-olds are leaving, rural areas have seen an influx of young parents, including immigrants and minorities, who are attracted by jobs in agriculture and energy. The migration has caused a generational divide. The rural population is also increasingly poor. “The reality is that how we define ‘rural’ is quite complicated,” says Robert Mahaffey of The Rural School and Community Trust, a non-profit that works to improve rural education. “The public is fixated on two stereotypes, one the idyllic Norman-Rockwell view, which tends to be middle class and predominantly white. The other is the abject, multi-generational illiterate unemployed people of color in the South or whites in Appalachia. The reality is more complex.”

Like Walton, where 40 percent of students qualify for the federal reduced-price lunch program, rural communities are often afflicted with problems—substance abuse, poverty, unemployment, teen pregnancy—that are as bad or more severe than those that trouble the inner cities. And they have special problems of their own. The remoteness of many communities makes teacher recruitment and retention a perennial problem—just one reason why the “turnaround” model under the federal government’s School Improvement Grant program (in which failing schools start over with a largely new staff) often doesn’t work. At the same time, the smallest rural districts can be hurt by shrinking tax bases and a federal Title I funding formula that often has the effect of favoring districts with larger, raw numbers of poor kids over districts with larger percentages of them.

These and other conditions have long frustrated efforts to improve achievement. Although rural areas have attained historically high levels of education, one in four rural residents still fails to graduate from high school, and only 17 percent of adults over age 25 have college degrees—half the percentage of urban areas.⁶

Advocates for the 10 million children who attend rural schools note that the local community is often the best

resource for these students. Thus they have called for programs that make it easier for communities to “grow their own” teachers rather than watching promising graduates leave their hometowns for other places. And they say it should be easier than it often is to put knowledgeable community members in the classrooms of understaffed schools under the supervision of highly qualified teachers. Many also point to the benefits of pulling other community services under one roof. But “community services” implies more than services that happen outside the school setting, notes Doris Terry Williams in a policy brief for the Rural Trust. “It implies a uniqueness about a place and the people who live there.”⁷

Opening a charter school, under the right circumstances, could be one option for boosting achievement in rural areas. As is the case at Walton, the greater autonomy offered by a charter would make it easier for schools to take advantage of their community’s unique history, culture, and economy. Unlike regular district schools, charters have the freedom to introduce novel curricula, relax hiring restrictions, and tailor professional development to their own needs. And yet Walton is among just 37 charter schools in Kansas, and in 2010, the last year for which figures are available, it was among just 785 rural charter schools in the nation—16 percent of the U.S. total. One reason for the small numbers, charter advocates say, is that the ills of rural schools have long been overshadowed by the problems of their urban peers. The growth of rural charters has also been stunted by state laws that don’t allow for them. The state of Vermont, for instance, has no charter law, even though more than half of its public school students attend rural schools.

Even when state laws do allow for charter schools, building support for them can be particularly difficult in rural communities. As researchers David Stuit and Sy Doan note in a brief for the National Alliance for Public Charter Schools, many of the prominent citizens in tightly knit communities are school district employees



or board members who may see charters as undermining their past efforts to find efficiencies through school consolidation.⁸ Founders of charter schools must be willing to challenge the establishment, and often their neighbors and friends.

Scott Shirey, the director of the KIPP Delta schools in rural Helena, Ark., suggests that one other reason the charter movement has yet to catch on in rural areas is residents' limited exposure to other possibilities. "In a small rural community where there isn't choice, and where there is less variance in the quality of education, the problems aren't as visible," Shirey told the National Charter School Resource Center. "If you have a wealthy suburban school up the block and your child's getting a lousy education, I think you feel the burn a little faster." Even when the demand is there, rural charter schools face the same problems that regular rural schools do. There are often no universities nearby from which to recruit staff, no public transportation, few vendors to produce school lunches, and few places nearby for enriching field trips.

Walton suffers from many of the problems that afflict rural school districts. So how has it managed to overcome them? For one thing, it has a geographical advantage: although big-city visitors may consider Walton the very definition of "boondocks," the town is just 25 miles from the outskirts of Wichita. That makes Walton what the education department classifies as rural "fringe," rather than "isolated" or "remote." Second, it is not just the project-based, agricultural model that makes Walton work; it is all the other things that make hands-on, themed learning possible: integrating 21st century tools and skills and a shared leadership in which all stakeholders have clear roles and responsibilities. But beyond these factors, Walton succeeds because it is not just project-based, but place-based. Just as rural advocates envision for other communities, the Walton schools use the whole town

as a laboratory and a resource, and the community, in turn, benefits from the vitality of the school.

SCHOOL-COMMUNITY CONNECTION

One prominent member of that community is Evan Johnson, a former science teacher and principal at Walton who now serves as the town's part-time mayor. Johnson first came to the school in 1959, when the graduation class numbered about 50. Now 75, he is back in the classroom, this time as a volunteer. He delights children with stories from the days when Walton had two grocery stores, several implement dealers and a depot that caught mailbags tossed out of speeding trains. But he is beloved mainly for his "Tool of the Week" talks. From his vast collection of antique gadgets, he pulls out potato planters, levels, and hoes—anything that might enliven a lesson about physics, chemistry, or math. (Sample question: Why would you use a wood-handled monkey wrench? Answer: it's warmer than steel.)

Johnson is among the many town residents who are helping teach Walton students by opening their businesses and farms. Even residents who no longer have children at the school willingly donate their equipment, their animals, their land, and their time. (One farmer wanted to donate 100 pigs, but he came up against a local ordinance limiting the number to 10.) As they do, they are supporting what the Rural Trust says is one of the most reliable strategies for increasing student achievement: place-based learning promotes deeper student engagement in curriculum, stronger relationships between students and adults, and authentic learning opportunities. Says the Trust, "The vital school-community connection is strengthened as the classroom moves into the community, tapping its often hidden resources and spotlighting unique human capital."⁹ For high-poverty rural schools with few "traditional" school resources, the Trust says



place-based learning can help fill gaps left by low tax bases and “curricula that does little to acknowledge the life circumstances of rural students.”

Against all of its successes, the unlikely challenge now facing Walton is how to stay afloat. Six years in, it faces a difficult dilemma: to keep going it has to grow, but to grow, it needs money. The original charter grant of \$335,000 has run out, and the school in its former incarnation was not included in the district’s recent \$29.9 million bond issue because district officials thought it would be closed. Even now, with every sign of success, the school board is mixed on whether the school should expand. The board did approve an expansion, but the vote was a narrow 4 to 3, with those voting against arguing (as they did back in 2004) that there were too many empty desks at Newton schools in town. Walton is funded at the same rate as other district schools, but because of its special curriculum, its per-pupil costs are higher than for the other schools. The state tax dollars brought in by students coming from other districts helps, but not enough. A teacher offers the district’s side: “You know if I’m looking at it from a budget standpoint, I’m thinking there are people who are going to be losing their jobs because of budget cuts; I don’t know if it’s really worth it to keep [Walton] open.”

For the Rural Life Center to operate more efficiently, the district wants it to serve two classes per grade. The school could easily fill up even if it doubled in size. But the limits of both its building and its budget make that scenario impossible. So the school has embarked on a fundraising campaign, with the goal of raising \$300,000 for two new classrooms, new bathrooms, and a conference room. Residents snapped up tickets last spring to attend Walton’s annual barn-raising festival, which features food, music, and games. Cargill, the agri-business conglomerate, recently wrote the school a check for \$10,000, as did the Harvey County Farm Bureau. A nearby convenience store was giving the school an average of \$100 a month from the proceeds

of its gaming machines, and one local resident chipped in \$50 of pocket change. But even with all of this, the school is just 10 percent of the way toward its goal. As much as she enjoys talking about the Rural Life Center, Vogt admits, “The whole funding issue has been a downer.”

Yet as stressful as the budget problems are, at the end of the day, Vogt doesn’t have to look far for encouragement. There are her tireless and talented teachers. There are the volunteers like Evan Johnson. There are the students who are so engaged in learning that they fight over who gets to shovel out the chicken coop. There is, despite the long hours and exhausting work, the satisfaction of knowing that this little school is raising student achievement at the same time it is reinvigorating a whole town. “It has energized all of us,” says Vogt. “It’s gotten us excited about teaching again.” >>

Notes

1. Ted Bredderman, *Effect of Activity-Based Elementary Science on Student Outcomes: A Quantitative Synthesis* (Albany, NY: State University of New York, 1983).
2. John W. Thomas, *A Review of Research on Project-Based Learning* (San Rafael, CA: The Autodesk Foundation, March 2000).
3. Guido Schwerdt and Amelie C. Wuppermann, “Sage on the Stage: Is Lecturing Really All That Bad?” *Education Next*, Summer 2011.
4. John W. Thomas, *A Review of Research on Project-Based Learning*.
5. Marty Strange, Jerry Johnson, Daniel Showalter, and Robert Klein, *Why Rural Matters 2011–2012: Statistical Indicators of the Condition of Rural Education in the 50 States*, (Washington, DC: The Rural School and Community Trust, January 2012).
6. “Status of Education in Rural America,” National Center for Education Statistics, U.S. Department of Education, 2007.
7. Doris Terry Williams, *The Rural Solution: How Community Schools Can Reinvigorate Rural Education* (Washington, DC: Center for American Progress, September 2010).



8. David Stuit and Sy Doan, Basis Policy Research, *Beyond City Limits: Expanding Public Charter Schools in Rural America* (Washington, DC: National Alliance for Public Charter Schools, February 2012).
9. *Placed-Based Learning Offers Opportunities for High-Poverty Rural Schools* (Washington, DC: The Rural School and Community Trust, Sept. 28, 2011).

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