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Opinion: 3D Vermont Competition Teaches History, 21st Century Skills

Rebecca Holcombe, Vermont Secretary of Education

Every year at the 3D Vermont Competition, I learn something about Vermont that makes me think differently about who we are as a state and how we have changed. Last year, for example, I learned all about a Brownington schoolhouse that was just moved back to its original site by 44 oxen and a crowd twice the population of the town. Back in 1869, the town moved the schoolhouse so it would be closer to the population center of the town. Now, we use buses to move children to schools instead, and the schoolhouse returned to its original site. The lesson for the students, however, was how valuable a resource a schoolhouse was to the community—important enough to drag behind 44 oxen in order to bring it where it was needed.

This past Friday, the Vermont Agency of Education, in partnership with Vermont Agency of Commerce and Community Development's Division of Historic Preservation and Vermont Technical College (VTC) as well as a number of other state level organizations, hosted the annual 3D Vermont Architecture and History Olympiad. Middle and high schools from across the state use this event as an opportunity to study the history and background of buildings in their communities and create digital 3D-printed scale models using SketchUP, a computer drafting and modeling software. The Olympiad showcases these models on a giant map, laid out on the Floor of Judd Hall at VTC. More importantly, the event highlights so much of what the AOE is proud of in our students and our schools.

The 3D Vermont event is the brainchild of history-turned-technology teacher Mike Hathorn from Hartford High School, who champions the event each year as a chance for students to engage with their communities while learning critical 21st century skills. It does all that and more.

The Windsor team— which has won the competition twice—presented an homage to one-time Windsor native Asher Benjamin, whose work gave shape to the "late colonial" style of architecture, and whose iconic details are lovingly recreated in houses and bridges across the Northeast, including a bridge in my own hometown. Between detailed explanation of the details of cornices and modern-day tributes to Benjamin's work, one Windsor student explained that this project changed how she thought about high school – it gave her a new passion for history and a new understanding of what constitutes professional work.

A Rutland Town middle school team lovingly replicated the Service Building on Merchants Row in Rutland. With a whopping seven stories, this building was the first "skyscraper" in Vermont, and remains one of our taller buildings. One student explained that the original owner, Rutland entrepreneur Carl Hinsman, named it the "Service Building" because he built it as a "service" to the community that supported his business success. This student was most

impressed by the passion and pride this early businessman showed in investing in the future of his community.

Some of the most interesting project presentations were from students whose buildings did not quite "print" as planned. The student designers could all thoughtfully discuss technical challenges and unexpected delays, as well as what they had learned as groups and individuals about both management of work tasks and technical challenges along the way. It was impossible not to be impressed with the thoughtfulness, introspection, and pride of these presentations.

Not only do these projects foster a stronger sense of community value and identity, they leave our young Vermonters with a new set of skills that, if they choose, they can immediately apply in a career context. One Hartford High School student told me he already earns up to \$30 dollars an hour using SketchUp to make scale architectural models for an architecture firm. That beats what many of our educators make, and he is still in high school.

Friday was a day to celebrate the many highly competent, highly engaged and very impressive young people of this state, as well as the schools that made it possible for them to participate in this showcase event. I look forward to learning more about this great little state next year.

Opinion: 3D Vermont (Revised: March 28, 2017)

VERMONT AGENCY OF EDUCATION