



Laura Urban , president of Alexandria Technical and Community College, and Al Sholts, chief operating officer of Alexandria Industries

Alexandria's strong business/education partnership can be model for other communities

A Civic Caucus Focus on Human Capital Interview

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Present

John Adams, Paul Gilje (executive director), Dan Loritz (chair), Dana Schroeder (associate director), Fred Zimmerman. By phone: Dave Broden (vice chair), Randy Johnson, Sallie Kemper (associate director), Al Sholts, Laura Urban.

Summary

Strong, visible support for hands-on learning by the Alexandria, Minnesota, community has led to success and innovation in both its new high school and the Alexandria Technical and Community College (ATCC), say Al Sholts and Laura Urban. Sholts, chief operating officer of Alexandria Industries, and Urban, president of ATCC, extol the strong interest in education by the Alexandria area business community and its solid relationship with both the high school and ATCC.

Urban reports that about half of ATCC's students come from more than 50 miles away from the campus. She attributes the college's attractiveness to students from all over the state to both the quality of its programs and its solid relationships with the business community.

Sholts believes firmly in the importance of creating relevance between what students are learning and the practical world. He advocates changing from the traditional way schools deliver curriculum to

using applied learning in all subject areas for all students, ensuring that students understand what they're learning and how to apply it. Communities must leverage business leaders to expose students to careers and help create a passion so they'll continue their education, he says.

Sholts and others in the Alexandria community worked together to incorporate that applied-learning model into the new area high school, which opened in fall 2014. The school, which a national technology magazine called the "Googleplex of Schools," chose a small learning community model as the new way to deliver curriculum to its students. Every student enrolls in one of the school's three college and career academies. Career pathways in each academy provide students with a plan to connect high school coursework with college and career opportunities after graduation.

Urban points out that the use of the state's Postsecondary Enrollment Options (PSEO) program is growing in the Alexandria region, so that some students earn a two-year degree from ATCC by the time they graduate from high school. She says that by using customized training and just-in-time training, ATCC can meet the current and future needs of business for a trained workforce both for the Alexandria community and statewide.

Biographies

Al Sholts is chief operating officer of Alexandria Industries in Alexandria, Minnesota. He joined the company in 1977 as a machinist and took classes at Alexandria Technical & Community College (ATCC) at the same time. At his job, he gained experience in quality control, tooling and Computer Numerical Control (CNC) applications. (CNC machines are automated milling devices that make industrial components without direct human assistance.) He received a two-year degree from ATCC in machine tool technology in 1979.

Sholts has held various management positions in Alexandria Industries, including machine shop manager, value-added operations manager and vice president of manufacturing. In 2006, he was named chief operating officer, with oversight of sales, engineering and manufacturing.

Sholts has become passionate about increasing the size of the Alexandria community's skilled workforce and encouraging high school and college students to consider a career in manufacturing. Sholts served on the ATCC Foundation board for more than 20 years, participating on several advisory committees for the college machine tool program.

He also was involved in creating a revolutionary industrial technology lab at the new Alexandria Area High School, which has been called the "Googleplex of Schools." He also led the development of curriculum at the high school that incorporates applied-learning skills. In 2014, Alexandria School District 206 presented him with the ACE (A Champion in Education) Award for his support of public education through advocacy, partnership, service and donation of resources.

Laura Urban is president of Alexandria Technical and Community College (ATCC) in Alexandria, Minnesota, a position she has held since July 1, 2014. From 2010 to 2014, she served as provost and vice president for academic affairs at Gateway Community and Technical College in Florence, Kentucky. She served at Lac Courte Oreilles Ojibwa Community College (near Hayward, Wisconsin) as chief academic officer and academic dean from 2006 to 2010, and as a business and general studies dean at Wisconsin Indianhead Technical College in Shell Lake, Wisconsin, from 1997 to 2006.

She was the director of the Small Business Development Center and program manager while at the University of Wisconsin-Superior from 1990 to 1997. Currently, she serves on the Alexandria YMCA Board of Directors and is president-elect of the Alexandria Rotary Club.

Urban holds a bachelor's degree in business administration from Northland College in Ashland, Wisconsin, a master's degree in college student personnel administration from Colorado State University and a doctorate in education from Capella University.

Background

The Civic Caucus has released two recent statements on human capital: [one in September 2014](#) laying out the human-capital challenges facing the state today and in coming years and [a follow-up paper in January 2015](#) offering recommendations for maintaining a high-quality workforce in Minnesota. The Civic Caucus interviewed Al Sholts and Laura Urban from Alexandria to learn about (1) the successful cooperation there among the community, employers, the high school and the Alexandria Technical and Community College (ATCC); and (2) innovative programs in the new Alexandria Area High School.

Information about Alexandria Industries. Alexandria Industries is a short-lead-time producer of engineered products. Customers for its contract manufacturing come from a wide range of industries, markets and locations.

The company was founded in 1966 as Alexandria Extrusion Company. (Aluminum extrusion is a manufacturing process in which a heated, softened-state aluminum billet is forced through a steel die to produce a continuous ribbon of the formed product.) Soon after its founding, the company began adding other services beyond its aluminum extrusion capabilities, such as machining, fabrication, anodizing and assembly.

Five businesses, Alexandria Extrusion, Alexandria Finishing, Alexandria Plastics, Alexandria Precision Machining and Alexandria Welding, are all integral parts of Alexandria Industries. Serving customers around the world, the company says it has proven to be more than a supplier by becoming the supply chain itself.

The company has three facilities in Minnesota, two in Alexandria and one in Wheaton. It has an extrusion facility in Indianapolis and a machining and fabrication facility in suburban Dallas. The company has a total of 560 employees, with 450 in Minnesota.

Information about Alexandria Technical & Community College (ATCC). The college is a two-year institution, which started in 1961 as part of Alexandria School District 206. It continued under the school district until it became part of the Minnesota State Colleges and Universities (MnSCU) system in 1995.

ATCC's 2014-2015 enrollment was 4,311 students, with 52 percent attending full-time and 48 percent part-time. Males make up 51 percent of the students and females 49 percent. Seven percent are students of color. Nearly half (48 percent) of the school's enrollment is made up of nontraditional-aged students. The college attracts people from all over the state, with 48 percent of the students coming from outside a 50-mile radius of the school.

According to Minnesota's Office of Higher Education, ATCC had a significantly higher three-year graduation rate in 2012 (52 percent) than any other MnSCU two-year college. The average rate for all two-year MnSCU colleges was 26 percent. Adding in the 15 percent of students who transferred out to another institution before graduation, ATCC had a three-year completion rate of 67 percent, again the highest among the MnSCU two-year colleges. Job placement rates for the college average more than 95 percent.

ATCC is recognized as a national leader in advanced technical skills education, according to its website. Most programs include hands-on, student-centered, experiential learning. The school has a history of extensive partnerships with local, state, national and international businesses and industries.

Discussion

We need to change the traditional way we deliver curriculum to students by using applied learning in all subject areas for all students. Applied learning shouldn't be restricted to only vocational curriculum, said Al Sholts of Alexandria Industries. "The curriculum is fine and we have some smart young people out there," he said. "Let's make sure they understand what they're learning and how to apply it. We need to change from traditional education methods to more of an applied-learning method."

Leverage business leaders in the community to expose kids to careers and help create a passion so they'll continue their education. Sholts said students likely will not be doing the same thing later in their careers that they'll be doing straight out of school. "We have to ignite the passion that allows them to continue to grow in their careers," he said.

Remove the bias against technical versus academic degrees. People can make a living wage if they have passion for what they're doing, Sholts asserted. They'll grow in their careers if they have passion. "It's not the degree that makes the difference," he said. "It's whether the person has been exposed to careers and whether they like what they're doing."

Make higher education affordable by ensuring the curriculum adds value to the degree and that students can apply what they learn. Sholts believes the people setting up curricula must make sure they get enough data from their consumers, the students. "In industry," he said, "when we're cutting costs, we have to figure out a better way to deliver our products." The same thing is true in education, he said. We need to get feedback from the students and from the businesses that both are getting what they need in the most economical way.

ATCC is an open enrollment institution (i.e., no selective enrollment requirements), except for the nursing and law enforcement programs. ATCC President Laura Urban pointed out that ATCC and other two-year MnSCU colleges accept students without a high school diploma or GED. (There are some programs, though, that do require a GED or high school diploma.)

"We take everyone at whatever level they come to us," said Urban. "It's our responsibility to then help them move through whatever program they eventually choose."

ATCC's curriculum must be relevant to what's needed in the Alexandria area and around the state. Urban said the local and statewide views are both important, since about half the students come from the greater Alexandria area and half from more than 50 miles from the college. "The attractiveness of the college's programs to people from all over the state speaks highly to the quality of those programs and to our relationships with the business community," she said.

It's urgent to prepare people for the workforce. The bottom line, Urban stated, is that because of lower birth rates, there are fewer young people coming into the workforce than there are baby boomers moving out of it. "And the urgency isn't just with young people," she said. "How do we keep adults motivated and coming back and upgrading and skilling up, as well?" With the economy strong, she said, the college has taken a big hit in the number of adults returning to school for training. They've gone back to work. "How do we work with business and industry to maintain a skilled workforce of adults, as well?" she asked.

Declines in enrollment are causing "the perfect storm" for ATCC and other two-year colleges. "The lower birth rates affect not only the workforce, but also colleges like ATCC," Urban said. "There are fewer people coming into our colleges, with declines in enrollment across the country. Minnesota is no exception and neither is Alexandria." The schools are left with fewer bodies to go through workforce training, she said, coupled with lower revenues from tuition and state aid. "We're looking at how we can deliver education more effectively and more efficiently with fewer students and fewer resources," she said.

ATCC works closely with business and industry through advisory committees to help the school stay current with its curriculum and equipment needs. Sholts said the college has open arms and open ears to area businesses. "The school is very proactive in finding solutions. It offers fantastic customized training, not just regionally but across the state. The school offers an open atmosphere if we or any other businesses have a need or concern."

ATCC is studying its market share with young people and with adults now and in the future. Urban says the school works very closely with its high school partners in the region, making sure they're getting the information they need to help their students progress into careers. Alexandria's high school now operates on a career academy model, she said, which provides students with college and career preparation at a much younger age than before. "It brings business and industry more into the high school."

Alexandria Industries sees a crisis coming in its own workforce. Sholts said the average age of the company's employees is 42 and the range is from 18 to 70. Most of the company's Minnesota employees, he said, are within a 65-mile radius of its facilities. "We already struggle to find skilled and unskilled workers," he said. "If we don't get something changed and in place within 10 years, I think there's going to be a complete worker shortage. Industries need the right number of people in the right fields in order to grow."

The Alexandria community is trying to make sure kids have exposure to their career opportunities. "We want kids leaving high school to have a good feel for a career they'll go into," Sholts said. "We want to make sure kids have the opportunity to understand different career paths available to them and then to find the appropriate education to lead to those paths."

In 2011, voters in the Alexandria School District passed a \$65 million referendum to build a new high school, which opened in the fall of 2014. Community members had said they wanted the new school to be like the Google campus. Its open, flexible, naturally lighted design led technology magazine *Fast Company* to herald it as the "Googleplex of Schools."

The school district chose the small learning communities concept for the new high school as the way to prepare Alexandria area students for college and career opportunities. The school is organized into small learning communities, collectively known as The Academies of Alexandria. The small learning communities concept, which has been growing across the country, is seen as an effective model to prepare all students for both college *and* career. The district believes this is an education program model that could be expanded or replicated elsewhere in Minnesota.

Sholts described the academies:

- Freshman Academy exposes ninth graders to career choices and to the three academies below. At the end of their freshman year, students will choose one of the academies in which they'll spend their 10th- through 12th-grade years:
- Business, Communication and Entrepreneurship;
- Engineering, Manufacturing Technologies and Natural Resources; and
- Health Sciences and Human Services.

Enrollments in the three academies beyond freshman year are almost equal, Sholts said. The school's total enrollment is around 1,200 students, with about 300 kids in each grade. About 100 students from each grade are enrolled in each of the three academies, making each academy's total enrollment of 10th- through 12th-graders around 300.

Teachers follow the students through their three years in an academy, Sholts said. Each academy has four to six career pathways, such as Business, Management and Administration; Manufacturing; and Science, Technology, Engineering and Math. Each pathway includes a sequence of courses designed to help prepare students for a specific career area and meet the requirements for high school graduation.

Students can take courses in other academies, if they choose, he said. The pathways provide students with a plan to connect high school coursework with college and career opportunities after graduation. Each academy has an advisory board that looks at curriculum.

Sholts described a "Physics in Manufacturing" course developed in the engineering academy that is team-taught by a science teacher and an industrial arts teacher. The class learned physics by building a radio-controlled car. The students used computer-aided design (CAD) to design a bumper that, after back-and-forth with engineers at Alexandria Industries, the company and the students actually manufactured. Once a week, engineers from various companies came in to expose the students to what was going on in their facilities. The students also took field trips to various businesses.

Alexandria's innovative high school education program, centered on personalized learning, prepares students for success in college and/or the workforce. According to Jill Johnson of

Alexandria Area High School, students in all Academies must undertake a core curriculum of English, Math, Science, Social Studies, PE/Health, and General/Global Electives as a requirement for graduation. In addition, she said, through the Academies model at the high school, students are provided with project-based, interdisciplinary learning that gives them "real-world" experience and provides connections with local businesses and professionals. The Academies of Alexandria model provides students with curriculum informed by local employers, links schoolwork and real-life work skills to provide students with employable skills, and plans that all students will have the opportunity to undertake an internship before graduation.

Use of the Postsecondary Enrollment Options (PSEO) program is growing in the Alexandria region. The PSEO program allows Minnesota students in 11th and 12th grades to take any or all of their courses at any Minnesota postsecondary institution for free. Also, 10th-graders can take any postsecondary technical course for free.

Urban said 48 PSEO students graduated this year with both a high school diploma and a two-year degree from ATCC at the same time. She said the PSEO students are mostly high school juniors and seniors, although she thinks the number of Alexandria sophomores taking technical courses through the program will grow, as students move through the academy model and are exposed to different careers.

She said high school students who are unable to come to ATCC's campus are taking an increasing number of online courses offered by the college through its online-in-the-high-school program.

The new Alexandria High School is looking to the future with a special lab built into the school . "We're trying to look to the future there through updated technology, such as virtual welding," Sholts said. "And for ourselves as a company, Alexandria Industries will have to change the way we manufacture." He said because there are not enough workers, there will be more automation. "We're automating heavily in our factories and we need very good machinists who can work with robotics."

Education should be designed for people's future careers, not just for education's sake. In the traditional delivery of high school curriculum, Sholts said, students do not understand how they're going to use the courses they're taking. They'll be more motivated in their high school classes if they can see how what they're learning applies to future careers.

ATCC and other colleges can respond to industry's needs right now. Urban said by using customized training, just-in-time training and grants from the Minnesota Job Skills Partnership program, the college can meet today's needs and look into the future.

ATCC sees more need for remedial help among its working-adult students who've been out of school for some time than among young people right out of high school. The biggest remedial need, Urban said, is in math. Students who come in far behind on basic skills can take part in adult basic education classes right on campus for free. Those who are just a little rusty, she said, are given intensive advising and tutoring. "While more students in other parts of the state may need remediation at various levels," she said, "there's not as much need for extensive remedial education here in the Alexandria region."

The reason Alexandria is successful in the high school and at ATCC is that people in the community are willing to work on education together. There is a great working relationship among the high school, the college, the community and business, Sholts said. We can discuss people's needs and come to a solution. "It happens through good leaders who are very open to change," he said.

Urban, who has been at ATCC for one year, said her attraction to ATCC was the "tremendous, very visible support for the college and the relationship between business and the college. I've been to places where that has not been the case," she said.

It's important to create relevance between what students are learning and the practical world.

Sholts said not all the curriculum changes planned at the Alexandria High School are in place yet, but there are courses now that apply what students have learned through hands-on projects. Physics students have learned concepts by building a radio-controlled car; teachers are working on a course that would use CAD to teach geometry; and in a statistics course, students would create parts in a lab in the school and measure the parts using a computer-controlled measuring machine. They'll use the measurements to learn the concept of variation.

Sholts said part of the accountability for this applied learning model will be good test scores and a high graduation rate.

The key ingredients in making town and gown work in Alexandria are communications and engagement. The community feels engaged with ATCC and the high school, Urban said. The college is represented in many community organizations and at community events. Each of the college's programs meets every fall with its own advisory committee, comprised of business and community leaders, to make sure the curriculum is meeting the needs of employers and the community.

Most ATCC students work part-time or full-time. Urban noted that at least 65 percent to 75 percent of students at the college work at least part-time, with a significant number working full-time. Employers in Alexandria are very accommodating to students, Sholts said. Businesses offer many different shifts for students and have opportunities for working part-time. Moreover, students who are working in an area that aligns with their careers can practice their skills at work. Urban added that a number of businesses offer tuition support for their employees who are in school.