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Press Release

PHOTOS AVAILABLE

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Meet your Next-Gen Employee: Middle-Schoolers!

Sound like too much long-range planning? Think again. Educators are now saying that for many students and their parents, high school age is too late to introduce them to technical careers. If you want today's kids to consider jobs in the skilled trades, they need to be exposed in middle school.

Fortunately, it's happening. The "4-year college for all!" mantra has finally gone bust due to the realization of the negative impact the absence of a generation (or two) of industry-prepared workers has had on state and federal economies, and the acknowledgement of the lack of jobs for debt-laden, non-employed college graduates.

Enter the new model, or should I say, the re-model? State departments of education and state governors are convening councils comprised of school districts, career counselors, teachers and industry partners to brainstorm effective ways to align curriculum with the fastest-growing business sectors—of which advanced manufacturing is one – and fast-track career-ready students. Not only is there a push to develop career cluster academies, but the push is happening at a younger and younger age.

Tennessee Model Incorporates Early Exposure and Externships

Such a council was formed in the state of Tennessee with outcomes that include beginning exposure to career counseling at the pre-kindergarten level! The lower grades have career introductions and explorations; 8th graders choose a career pathway which comes with an assigned counselor that will then remain with that student until graduation; and 9th graders make visits to companies and career fairs.

The Tennessee model includes learning-based projects every semester run by a team consisting of a counselor, an academic teacher and a career technical education (CTE) teacher. All three on the project team complete an "externship" in the subject area of their project. An externship is a program that places educators at an industry company during summer vacation for a short "crash course" on industry methods which can then be taken back to the classroom and incorporated into the curriculum.

The Tennessee high school CTE programs are all aligned to industry labor data and all students are on track to graduate with some kind of an industry certification. Industry representatives co-teach and co-counsel. Since implementation of this progressive initiative, student participation in career technical organizations has increased over ten per cent.

California Uses Pathways and SkillsUSA to Reach Middle Schools

The state of California is investing close to 2 billion dollars in CTE over a period of several years, working to increase innovative CTE programs, foster new academies and create professional development opportunities for teachers and counselors. They are also making adjustments to credentialing requirements to make it easier for members of industry to achieve the required qualifications to teach.

SkillsUSA California, a state affiliate of the nation's largest career technical education member organization for teachers and students, boasts the largest number of middle school members in the nation with 346. As members of SkillsUSA, students can compete in their career sector competitions at a regional, state and national level; perhaps even more importantly, they are taught the invaluable soft skills of leadership, teamwork and communication.

Schools districts and individual schools are taking novel approaches to this skills rejuvenation. In San Bernardino, CA, the school district has converted to a K-12 career pathway system, where kids are exposed to a kindergarten-focused CAD program and by 4th grade, they are learning Solidworks, Mastercam and AutoCad. Students are also exposed to (industry-grade) CNC machines and 3D printers among other equipment. At Adams Middle School in Brentwood, 7th graders are introduced to mechanical drawing concepts and woodworking measurement and hand tools. In 8th grade, they learn the safe use of power tools and begin construction projects. They learn how to use CAD to create something that can then be 3D printed. "Kids love the class and we have a lot of fun," says instructor Derrick Bullington.

At Corona Fundamental Intermediate School, they created a woodworking pathway that segues into the Corona High School program. Their instruction includes safety/OSHA, hand and power tools, wood selection, design and style, materials budgeting, time management, drawings/blueprints and more. They offer an after-school SkillsUSA club where they can advance their skills with lathe turning and custom projects. Instructor Tony Arballo credits his district administrators' support as a major asset to the program.

Rural School in Oregon

When wood instructor John Stearns started teaching in a small rural school ten years ago, "Woods Manufacturing" wasn't on the kid's radar at all—until John created a "Woods .5." This intro to the shop started them on small projects and introduced them to CNC routing. "Stepping up to larger furniture projects is easy once they understand the concepts of the smaller projects, and it gets them interested in the high school shop," says John. Now his high school class enrollment has ballooned to over 100 students a day (one third of the total high school enrollment!) "Students are excited about design and potential careers. I am helping to place a graduating senior --who was in my first 8th grade class --with an industry partner this summer."

Teacher in Arizona Comes Out of Retirement to Rebuild Wood Program

In Arizona, Tom Bockman's high school wood program closed (prematurely? read on), sending him into early retirement. Not that comfortable with too much leisure, Tom stepped up to revamp a very small but determined wood program at Franklin Phonetic School. The lack of proper facility and equipment almost had him running for the door, were it not for the kids. He endured and remade the whole experience using scraps he could find (dumpster diving at the cabinet shop) and some limited grant funds. He started at 2 days a week, is now at 3, and they possibly want him for 4 next year. He's been garnering a lot of publicity, in fact, his old district contacted him and wants him to come back! Tom has managed to fix up a new bigger space and is accomplishing amazing things with kids as young as 4th

grade. Next on his wish list? A Piranha Fx Laser and 3D Bundle by NextWave Automation, which would be perfect for his middle school outfit.

Bringing it Home—What You Can Do

Returning to the glory days of skilled trade instruction in public schools may still be a ways off, but things are in motion. Educators and legislators alike understand the vital necessity of teaching complex thinking skills in order to compete in a global economy. What these programs are doing is laying the groundwork for exploration, planting seeds of curiosity and challenge.

So what can businesses do to encourage this tidal wave of interest in preparing students for careers in the workforce? In fact there is quite a menu. Chew well and invite your colleagues to the table!

- Contribute supplies or equipment as you are able. AWFS member company, Arauco – North America, has been providing MDF and particle board every year to Judson Middle School in Salem, Oregon, which allows the students to visualize and then create small projects. “Arauco’s support has helped the program grow immensely,” says Wade Gregory, Western Region Sales Manager. “The kids take such pride in the projects they are able to create.”
- If you have kids, express yourself at PTA meetings and with local schools boards. Right now, parents are a prime target audience for understanding that jobs in manufacturing are not the dirty and grim jobs of previous centuries and that they can in fact provide their children with significant career opportunities and comfortable lifestyles.
- Make your voice heard with local legislators. Ask them to support CTE. Legislators DO listen to their businesses constituents.
- Reach out to local schools to make a presentation about your segment of the industry and the industry at large. Suggest they invite parents and counselors in.
- Offer tours of your company to schools and counselors. Consider doing it after hours so that students can bring a parent. You can also open your doors on “Manufacturing Day,” an annual event aimed at exposing more young people and their parents to manufacturing jobs. Manufacturing Day is on the first Friday in October. Visit www.mfgday.com for info on hosting or visiting an event.
- Offer internships or teacher externships at your company.
- Teach! Educators are needed at every level. Try a single course or if you are retiring from industry, why not conclude your career with a few years of teaching? States are working to facilitate credentialing for industry professionals. Contact your state department of education or local school district to inquire.
- Mentor a class in the design, delivery and assessment of a project using a real problem/client solution. Assess the project using real-world standards. Students visibly step up their game when industry professionals are watching!
- Advertise your product/business in the SkillsUSA magazine, *Champions*, or the ACTE magazine, *Techniques*, to build your future brand loyalty.

For basic guidelines on speaking at schools, offering tours of your facility or creating an internship or externship program, go to www.AWFS.org/education/industry to find guides to help in these areas.