# BRIGHT AND EARLY:

## Young Students Experience Career and Technical Education

By James Paterson

If you ask Dean Baker about the lagging effort by our education system to help young students explore and understand a wide range of career options, you can almost hear him bristle at the end of the phone line. But there's also a hint of optimism.

"It's these images of smokestacks, dirty jobs and low pay. It's old thinking," he said. "But I think it's changing."

Baker, a veteran trades and manufacturing technology instructor at Francis Tuttle Technology Center in Oklahoma City, Oklahoma, and vice president for the ACTE Trade and Industrial Education Division, is not alone. Other experts in school districts around the country believe it is important to give students in elementary and middle school more information about a broader array of options.

"I think early on they rule out wide ranges of good choices for some not very good reasons," said Richard Lapan, a professor at the University of Massachusetts and author of the book Strength-based Career Development. "My guess is that critical decisions like whether or not to pursue careers in tech fields are not very well thought out."

A new report from the Georgetown University Center for Education and the Workforce suggests that we must do a much better job of connecting students with the right information about careers and do it even earlier. The report highlights cutting-edge state education programs helping to reduce "uninformed education and workforce decisions," and demonstrates how educators are becoming more aware of the need to equip schools (and thus, students) with better information about jobs (Carnevale, Garcia, & Gulish, 2017).

"Not every good job requires a four-year degree and we need to get that message out to students, even at an earlier age," said Tanya Garcia, co-author of the report. "And we need to expose them to all the options with good information."

## Exploration and Planning

A report produced by the Association for Career and Technical Education (ACTE) last year noted that, despite budgetary and personnel limitations, middle school is the age to encourage career and technical education (CTE) when students "are at a higher risk for disengaging from learning due to challenges in forming identity, coping with puberty and navigating new environments" ("Career exploration," 2017).

Nancy Trivette, head of agricultural education for New Jersey and vice president for the ACTE Agricultural Division, said that elementary students benefit from awareness about careers to broaden their understanding of options, while middle school students can begin to explore specific paths, see careers first-hand and plan theirs.

"Young students become what they hear and see so we have to get the message out about our opportunities," she said. "That's critical."

ACTE noted that the development of engaging, useful online tools for career exploration has soared over the last few years, and schools strapped for resources are turning to the Internet, particularly sites that support exploration ("Career exploration," 2017). For instance, California CTE officials promote a lively "Who Do U Want 2B" page that offers younger students videos, a quiz, games and other tools. An interactive quiz asks students to choose headlines describing their future with optional responses including "Won the Nobel Peace Prize" and "Grew the world's largest pumpkin." One section contains videos from young people in each of 15 career pathways describing their journey and linked to a page with details about each and a game that connects players to the information.

Students in Wisconsin's Academic and Career Planning (ACP) program begin to develop a very specific career plan in the seventh grade. "Students will be able to explain and provide evidence showing how their strengths, interests, and skills relate to a specific Career Cluster," the program guidelines state, and show "progress on their academic, personal and/or [employability] skills goals" ("Academic and career," 2018)

Lana Barnes, a counselor at J.R. Gerritts Middle School in Kimberly, Wisconsin, said, by eighth grade, her students create a portfolio that includes a personal statement, a resume and documentation of their strengths, challenges and goals. On ACP Tuesdays, when time is allotted in class, students must also complete reviews of all 16 Career Clusters, and narrow down their interest to four, which they research further.

"We have them, in eighth grade, lead a conference for their parents by sharing their portfolio," she said. "Then we discuss transition to high school, selecting courses that align to their goals, and getting involved both in and out of school to help them continue to build on their strengths and interests."

## Seeing is Believing

Jan Bell, a career advisor at Tulsa Technology Center and vice president for the ACTE Guidance and Career Development Division, said hands-on, direct experience is essential for young students. Her school offers an opportunity for students to visit their facilities or a mobile manufacturing trailer manned by students. "Often if young students can make that connection to a person they identify with, they can then see themselves in these positions," Bell said.

At Alaska's Wynne Junior High School, students participate in job shadow days, where they visit medical offices, lumber yards, drug stores, banks, farms and the police headquarters, according to Sonja Wright-McMurray, associate director for CTE for the Arkansas Department of Career Education. Likewise, students at J.R. Gerritts Middle School in Wisconsin get visits from local professionals and take two-day mini-courses, designed by teachers to give the students an intense taste of a specific position, ranging from automotive repair to the law.

Career and technical student organizations (CTSOs) also can help provide hands-on experiences and often gain support in earlier grades, where administrators and parents are hungry for

extracurricular activities. A Colorado Technology Student Association guide to CTSOs notes that in middle school they may only require a willing administration and an interested teacher ("The benefits," 2016) to begin enriching students' educational experience through organizational membership.

"It is important in middle school for students just to explore CTE options and get an idea about what is available and try it," Trivette said, advocating for CTSOs.

## Part of the Structure

Increasingly, schools provide CTE exposure to middle school students and even elementary students in their scheduling — structures that the ACTE report said "help students identify careers of interest and develop employability skills that will serve them in further education and the workplace" ("Career exploration," 2017).

- Denver Public Schools require educators to expose middle school students to CTE fields each quarter through an individual academic and career plan process.
- Through Nebraska's well-respected CTE effort, a special Engage program provides schools with a four-unit middle school course in which students "define Career Clusters and pathways, describe examples of career readiness, utilize self-assessments to better understand interests, establish a career portfolio and create a personal learning plan to provide direction to high school and post-high school activities" ("Engage," n.d.).
- Indiana's College and Career Pathways courses require that middle school students complete interest inventories, meet in-person and virtually with people in various careers, create resumes and cover letters, and set goals.

## CTE IS COOKING AT THIS ARIZONA SCHOOL DISTRICT.

One educator who recently heard Patti Beltram describe her CTE program didn't mince words: "She's on fire," he said. And she's the first to agree. "I'm very, very passionate about it. I drive people crazy."

As director of career and technical education for the Peoria Unified School District just outside Phoenix, Beltram has been a key player in a 10-year push to build a CTE awareness and training program that not only provides a "strong interlocking network" of coursework for secondary school students (with training options at various levels in various fields), but puts all 6,500 middle school students through two years of coursework that gives them a well-structured, comprehensive look at CTE career paths.

Students enrolled in the first quarter of their seventh-grade year are introduced to the process, and, in the final quarter of their eighth-grade year, develop a plan and review their work, with the six quarters between devoted to the exploration of specific career paths. Their plans are then reviewed by high school counselors and revised as they work through high school.

Within these classes students complete an interest inventory, followed by career searches. They must then complete a report on their exploration with details about two jobs in each career path, including the responsibility, outlook and education required. Beltram said students "decide what they don't want" and plan for a way to further explore and study what they do.

During the quarter devoted to specific pathways, they have an opportunity to complete hands-on projects with a focus on fashion design using recycled materials, CPR, robotics, engine repair, the school's morning announcements, sports medicine, hydroponic gardens; students also become actively involved in career and technical student organizations (CTSOs) on campus.

"We have all our middle school students explore all the 16 Career Clusters in a really thorough way through all of these programs," she said.

Beltram is proud to point to a host of successes, including a student, going into law, whose interest was piqued or the plumber who got excited about the field in eighth grade — or even the young girl who was convinced she wanted to be a doctor until she passed out at the first sight of blood during a hospital tour.

Administrators point to the program as one reason for the district's high (95 percent) graduation rate and its students' strong basic understanding of all potential careers, that regularly gains state and regional recognition.

"We can give kids that 'aha' moment, and sometimes that means discovering something they might want to do they have never considered, and sometimes that might mean they change their mind when they are exposed to what they thought they wanted."

Beltram said parents and administrators have few complaints. Students who seem to be on track to attend college still get a well-rounded, fundamental look at the options and the basic career fields.

"Even if a student is sure they want to be a lawyer, they understand the basics of law and the other fields where they might want to practice. It helps all of them understand the real world of work."

- In Tennessee, students go through a sequence of courses related to science, technology, engineering and math (STEM) fields, including in sixth grade when they see how STEM workers tackle problems and model manufacturing processes or use health care data, and in seventh and eighth grade where they examine STEM innovators; undertake makers' hands-on projects about wind turbines, bridges and 3-D printing; and focus on employability skills.

In elementary school, CTE efforts often involve exploration through online resources, career days or discussions about planning careers, many times left up to a teacher or counselor, but Landmark Elementary School, in Glendale, Arizona, has formalized its CTE program to provide extensive classroom time.

Educators partnered with area businesses and the Arizona Business and Education Coalition, an organization that works to link the business community with K–12 and higher education. The students hear regular talks by people in various jobs (e.g., a local fire chief and doctor to discuss health-related and emergency service careers, a policeman to talk about public safety and legal issues), do career exploration activities online and rotate through five career academies as the year goes on.

"It's invaluable if we can get students started at this age," said Patti Beltram, director of career and technical education for the Peoria Unified School District just outside Phoenix, who has worked on the development of the program with Landmark. "Think about how far along they'll be in understanding career options with a start like this."

The Wisconsin ACP program offers specific curriculum for elementary school students that includes field trips, guest speakers, and life skill lessons. "Each child is encouraged to explore their developing strengths and interests through our diverse curriculum," a program description reads. "Connections between strengths/interests and the world of work are developed early and explored" ("Academic and career," 2018).

## Counselor Connections

Bell said the responsibility for CTE exposure often falls with counselors, though the American School Counselors Association notes that, while career exploration is supposed to be a cornerstone of counseling programs, counselors often don't have time for it with growing caseloads of 500 students on average, up to 1,000 ("Student-to-school," 2015).

Jill Cook, assistant director for the American School Counselors Association, said counselors are "paying more attention to CTE" and encouraging "experiential" opportunities and exploration. At a minimum they are expected to do interest inventories that include accurate, up-to-date data about CTE pathways.

"We also need to identify gaps in college and career access and address both intentional and unintentional biases related to college and career counseling," she said.

To bolster CTE, Arkansas has put full-time college and career coaches in middle and high schools in 34 counties to work with students on college and career plans. In middle and high schools in the highest poverty areas, coaches arrange visits by professionals and organize career camps where experts from certain pathways visit at once, present information and are available for personal discussions with students and lead them in hands-on activities.

Sonja Wright-McMurray, associate director for CTE for the Arkansas Department of Career Education, believes coaches play a critical role in the development and revision of a career plan as the students move through grades seven through 12 using a state online career planning system.

"It is important to begin the conversation at this level, because we capture students prior to the time when grades and credits count toward graduation," she said. "We can help them begin to look at course selection as not only a means to earn credits, but also an avenue to prepare them for life after high school."

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**James Paterson** is a freelance writer. Email him at jamespaterson7@gmail.com.

## REFERENCES

American School Counselors Association. (2015). Student-to-school-counselor ratio 2014–2015. Retrieved from https://www.schoolcounselor.org/asca/ media/asca/home/Ratios14-15.pdf.

Association for Career and Technical Education. (n.d.). Career exploration in middle school: Setting students on the path to success. Retrieved from https://www.acteonline.org/uploadedFiles/Dump/ACTE_CC_Paper_FINAL.pdf.

Carnevale, A., Garcia, T., & Gulish, A. (2017). Career pathways: Five ways to connect college and careers. Retrieved from https://cew.georgetown.edu/wp-content/uploads/LEE-final.pdf.

Colorado Technology Student Organization. (2016). The benefits of implementing a career and technical student organization. Retrieved from http://cotsa.cccs.edu/the-benefits-of-implementing-a-career-and-technical-student-organization/.

Kimberly Area School District. (2018). Academic and career planning (ACP). Retrieved from http://www.kimberly.k12.wi.us/departments/acp.

Nebraska Department of Education. (n.d.). Engage! Career exploration and readiness. Retrieved from https://www.education.ne.gov/schoolcounseling/engage/.