

# Techniques

OCTOBER 2019

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## POSTSECONDARY *Success*



- What does postsecondary success mean to you?
- Getting What They Have Earned: Lessons Learned About Awarding College Credit Through High School Articulation
- I AM A SUCCESS BECAUSE OF FCS



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# Table of Contents

**14** WHAT DOES POSTSECONDARY SUCCESS MEAN TO YOU?

Success is a universal concept that means something different to each individual. For this issue we asked each of the 50 fellows in the inaugural cohort of the Postsecondary Leadership Success Program at ACTE—sponsored by the FCS/CTE Foundation to discuss what postsecondary success means to them. Fellows were also asked to discuss the ways in which they felt participation in the program and with ACTE has prepared them to equip their students and communities for success in career and technical education (CTE). Read on to learn more, and to discover how professional development opportunities like this play a vital role in postsecondary success in you and beyond.

Learn more about postsecondary leadership success with the FCS/CTE Foundation. Visit: [acteonline.org/plssp-ecmct](http://acteonline.org/plssp-ecmct).

## THEMES

- 14 What Does Postsecondary Success Mean to You?
- 26 Getting What They Have Earned: Lessons Learned About Awarding College Credit Through High School Articulation
- 32 I Am a Success Because of FCS

## FEATURES

- 40 Beyond Industry Partnerships
- 44 Northwest Intermountain Metal Manufacturers Experience CTE Success

## UP FRONT

- 6 Leading Edge
- 8 Classroom Connection
- 10 Quality Counts
- 12 Leadership Matters

## IN THE BACK

- 50 Inside ACTE
- 54 Career Curve
- 56 Industry Connect
- 58 EVENTS CALENDAR
- 59 Crossword Puzzle

**26** Getting What They Have Earned: Lessons Learned About Awarding College Credit Through High School Articulation

By John A. Jaramillo, Karl Irwin & Barbara Cox

**32** I Am a Success Because of FCS

Since the Smith-Hughes Act of 1917, family and consumer sciences (FCS) have been a part of career and technical education (CTE) in the United States. Some FCS careers once popular are no longer relevant — have you been to your high school's lunch? Nevertheless, family and consumer sciences-related careers continue to evolve to address the knowledge and skills necessary for success in today's society.

With the advent of the career cluster model, some not familiar with the long history of FCS as CTE have questioned its role in career/career preparation vocations. There is one specific cluster labeled Family and Consumer Sciences, because family and consumer sciences as a profession integrates many different fields of study in order to enhance the well-being of individuals, families and communities. As such, FCS related careers can be found in most career clusters, and many FCS career offerings are foundational to all career clusters.

Meet three individuals who see their FCS coursework as foundational to their career success and have shared their stories: James O'Neil, workforce management project planner with Walt Disney Parks and Resorts; Abundia Lottens, a tailor employed by Nordstrom in Chicago; and Maxwell Golden, an undergraduate student in family and consumer sciences education at Purdue University. Recently I had the opportunity to speak with O'Neil, Lottens and Golden as we discussed their pathways of choice, secondary FCS coursework, and the post-secondary education key provided to them from career.

By Carol R. Wehman



[acteonline.org/pages](http://acteonline.org/pages)



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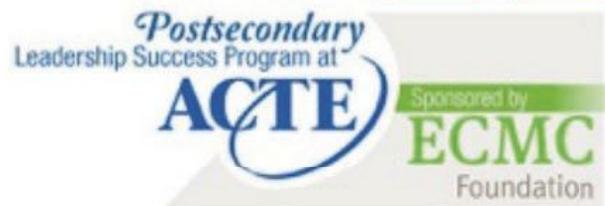
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## POSTSECONDARY SUCCESS

**AAH, SO MANY OPTIONS FOR POSTSECONDARY SUCCESS TODAY!! WE HEAR THE STATISTICS FROM MANY SOURCES INCLUDING GEORGETOWN UNIVERSITY (2014): “BY 2020, 65% of jobs will require training beyond high school.”**

2020?! That’s NOW! How are we measuring up? Are we ready? Do we encourage students to pursue courses, pathways, certificates, apprenticeships and/or degrees to be ready for careers? Do we engage them throughout their education in work-based learning or career experiences, student organizations and competitions to prepare them for the future?

Yes, career and technical education (CTE) has made great strides in preparing the whole person for global career opportunities. Even better, we are creating a greater awareness of these opportunities through constant communications; thanks to social media we can gain a lot of traction on any single issue as career and technical educators — ACTE members like you — post comments and share information, allowing us to reach the masses in our personal and professional networks.

Strong collaboration between secondary and postsecondary educators enables students to enhance learning as they attain industry credentials, certificates and/or degrees. Programs of study based on industry needs and trends, with multiple entry points and which culminate in recognizable credentials: CTE prepares successful graduates for global careers and, sometimes, shortens the length of time necessary for enrollment, saving students and their families time and money. An increasing number of CTE students are completing requirements for an associate degree before graduating from high school!

Credit transfer agreements, guided by documentation outlined in the Strengthening Career and Technical Education for the 21st Century Act, formalize the collaboration for students and provide access to postsecondary and college credit. **All of this and more can be referenced in *Perkins V: The Official Guidebook* authored by ACTE’s Director of Public Policy Alisha Hyslop.**

Today’s educational opportunities through CTE are providing students many choices, options and opportunities for success. This issue of *Techniques* will explore the ways in which these opportunities resonate across the spectrum of CTE. We asked, “What is postsecondary success to you?” Discover answers to this big, important question from fellows of the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation. And also from Carol R. Werhan, association vice president of the Family and Consumer Sciences Education Division, as she profiles three individuals who have found postsecondary success and who credit FCS education for that success.

I am proud that career and technical education continues to be a major factor in students’ career, personal and professional success. I am even more proud of career and technical educators nationwide who work every day to make these opportunities available to our students. It is our exceptional members who carry forward ACTE’s vision: “empowering educators to deliver high-quality CTE programs that ensure all students are positioned for success.”

Nancy Trivette

ACTE BOARD OF DIRECTORS PRESIDENT

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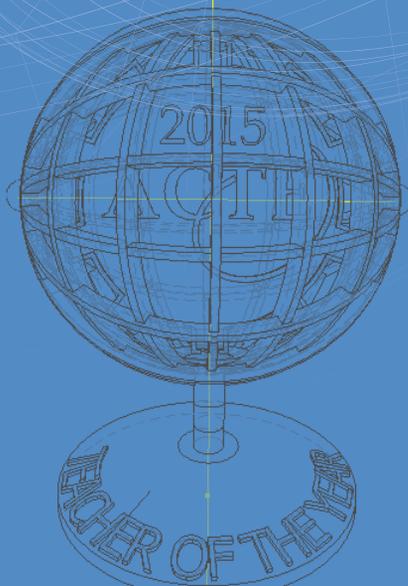
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ACTE is excited to announce the winner of our fourth annual student contest to re-design the 3D-printed trophies for the ACTE Excellence Awards. Thanks to Stratasys, we are pleased to present these unique trophies that not only celebrate ACTE's core values, but also embody them. Created by cutting-edge technology, the trophies manifest CTE's role in preparing students for 21st-century careers, and they harness the power of collaboration between CTE and business and industry partners.

The winning trophy design created by Kathleen Terwilliger of New Hampshire will be 3D-printed by Stratasys and presented to the national award winners at the 2019 ACTE Awards Gala in Anaheim, CA.



*The winning design of the 2019 contest was created by Kathleen Terwilliger from Seacoast School of Technology in New Hampshire. For her winning design, Terwilliger received \$1,000 and a free one-year lease of a 3D printer for her school.*

### ELIGIBILITY

The contest is open to secondary, postsecondary and adult CTE students in 3D-design courses or other CAD courses. Students may enter as individuals or as teams of no more than two (2) people.

**DEADLINE: MAY 1, 2020**

### HOW TO ENTER

ACTE is now accepting entries! Learn more about the contest and our prizes at [www.acteonline.org/trophy\\_design\\_contest](http://www.acteonline.org/trophy_design_contest).



# TEACHING SKILLS THAT MATTER

By Anita Foor

**GRAB YOUR PHONE, OPEN YOUR FAVORITE SEARCH TOOL, AND ENTER SOMETHING LIKE “skills lacking in college graduates.”**

Take a scroll. It’s likely the information you see isn’t news; there is growing demand by industry for new hires to have high-quality, consistent employability skills — before employment.

One report by the QS Intelligence Unit (Karzunina, D., Moran, J., Philippou, G., & West, J., 2017) indicates that 69% of human resources managers expect a challenge when hiring college graduates for open positions. The reason? Inadequate employability skills. In addition to ensuring academic and technical knowledge and skills, educators at all levels have a collective and urgent responsibility to equip graduates with employability skills.

SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens. That’s the organization’s mission — to ensure that students are equipped with the skills needed to obtain and retain high-skill, high-wage and high-demand jobs. SkillsUSA defines the career-ready individual through the SkillsUSA Framework, and it is this Framework that drives the organization toward answering the question of “How?”

## Define the Expectation

SkillsUSA reviewed a collaborative report (Barrington & Casner-Lotto, 2006) including data about responses from more than 1,000 employers about which skills are most needed by industry. In brief, employability skills made the list. This research informed the creation of the SkillsUSA Framework which includes 17 Essential Elements — employability skills — catego-

rized within three components: personal skills, workplace skills, and technical skills grounded in academics.

1. **Personal skills** include the individual’s attitudes and approaches to how one shows up, acts toward others, and gets work done.
2. **Workplace skills** include those needed for successful interactions and productivity with other people. Futuristically, a “workplace” is a place of employment. Presently, it is anywhere they are part of a team: a family, a school band, a competitive team, an organization or a classroom.
3. **Technical skills** grounded in academics are used by all employees. Specific tools used, training completed, or policies and procedures followed are informed by the specific application of academic and technical knowledge and skills within a particular “workplace.”

## ACTION:

Define the expectation by listening openly to the real needs of families and employers in all communities and by doing the hard work of making explicit connections between the present and the vision of the future.

## Implement

Many data exist about the needs and characteristics of today’s learners and best

practices for educators to implement. SkillsUSA engaged industry representatives, educators, practitioners and other key partners to establish an approach to teaching employability skills to middle school, high school, postsecondary and adult learners in ways that meet the needs data identify. The result was the development of age-specific project-based learning courses that include project activities and e-modules that provide ample opportunity for student voice and choice, differentiated instruction, and contextualized learning. Educators work daily to teach career readiness, and SkillsUSA designed a flexible implementation approach in which educators are empowered to integrate employability skill content into technical content or use a stand-alone approach.

Four courses, known collectively as the SkillsUSA Career Essentials: Experiences, engage learners in implementing — trying on — the skills included within the Framework. The content in each course is derived from the associated level of Framework competency statements.



The SkillsUSA Framework defines career readiness and specifies the transferable skills needed by all employees, regardless of their position or industry.

### Exploratory

Learners aged 12–14 develop the skills needed for high-quality relationships, for successful transitions into high school, and for conducting meaningful and productive career exploration. Learners produce four projects through the course, one of which they can share publicly to demonstrate learning.

### Fundamental

Engages learners aged 14–16 in understanding relationships between employability skills, demonstrating the 17 Framework skills, giving and receiving feedback, reflecting on learning, and planning their future. They complete nine short projects and have opportunities for workplace experiences.

### Advanced

Learners aged 17–19 practice the skills more rigorously while working over a longer period of time on one major project — a Career Readiness Capstone Portfolio. This portfolio is an authentic assessment including iterative work practicing skills, receiving feedback, implementing feedback, and articulating their abilities. It includes practice interviews and endless opportunities for work-based learning.

### Adult Learner

Adults over the age of 20 build their own Career Readiness Capstone Portfolio. The project activities and e-modules are designed for an adult who may have a family, be working, have been previously employed, or who is seeking employment. Flexibility allows adults to fit this course into a busy life.

No matter who the learner is, or where they are, every project activity they complete is done through the lens of a career field in which they are interested.

### ACTION:

Implement the explicit teaching of employability skills by providing a safe place where students can try them on; a place where they can practice, “fail,” receive feedback, practice some more, and celebrate their unique victories while applying the content from all courses in which they are enrolled.

### Measure what Matters

Data matters in everything we do in education. It does. Yet so much of the influence of educational experiences is difficult to track and report on with data. It’s difficult to quantify the impact of an educator’s relationship with learners, for example, but SkillsUSA knows it matters. That’s why the Career Essentials: Experience courses include specific time and instruction for conversations between students and their teachers, parents/guardians, mentors, peers and industry partners. The results of these relationships can be witnessed in the work students produce.

The courses have associated pre- and post-assessments to help practitioners quantify what students know and can demonstrate with respect to employability skills before and after the course. The Fundamental, Advanced, and Adult Learner courses also include shorter unit pre- and post-tests to inform instructors frequently throughout the course about learners’ unique understandings.

Additionally, learners may earn micro-credentials at the exploratory and fundamental levels, and the industry-validated Career Essentials Credential at the advanced and adult learner levels.

### ACTION:

Measure what matters by ensuring that future employees can articulate their own skills and experiences to demonstrate their employability skill proficiency.

### Teach the Skills that Matter in Ways that Work

Pick up your phone again; search for characteristics of the age of learners with whom you most often work. Ask, “How am I...”

- engaging students in explicit, clear and meaningful instruction to develop employability skills?
- making all learning connect directly to learners’ specific career interests?
- structuring all student work to fit right into the challenges they face and victories they celebrate?



The Career Essentials Credential by SkillsUSA is validated by industry and communicates an employee is proficient in the Framework skills.

- helping learners begin with their own end in mind?
- helping learners safely practice skills and receive and implement feedback?
- helping learners measure their own growth and communicate with future employers about it? ■

**Anita Foor** is a career and technical education teacher currently serving teachers, students and industry as the senior manager of curriculum and instruction at SkillsUSA. She believes all learners need and deserve the employability skills that allow them to invest in others through meaningful employment. Email her at [afoor@skillsusa.org](mailto:afoor@skillsusa.org).

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### EXPLORE MORE

You can learn more about SkillsUSA Career Essentials: Experiences; visit [mycareeressentials.org](http://mycareeressentials.org).



# SEQUENCING AND ARTICULATION

By Catherine Imperatore

## HIGH-QUALITY CAREER AND TECHNICAL EDUCATION (CTE) PROGRAMS OF STUDY ARE COMMITTED TO

vertically aligned learning within and across education levels to facilitate students' progress toward education and career success. The importance of this concept is captured in the formal definition of "program of study" included in the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), which describes a coordinated, non-duplicative sequence of content that progresses in specificity and has multiple entry and exit points. For this reason, Sequencing and Articulation is one of ACTE's 12 elements of high-quality CTE within the *Quality CTE Program of Study Framework*.

The Sequencing and Articulation element of ACTE's quality framework

includes eight criteria that address key components of the definition of a program of study referenced above as well as the articulation, coordination and collaboration that support programs of study, career pathways and accelerated learning. The criteria listed below are from the 2018 version of the ACTE *Quality CTE Program of Study Framework*.

## Criteria for Quality in Sequencing and Articulation

- a.** The program of study includes a sequence of courses and/or competencies across secondary and postsecondary education that incorporates technical, academic and employability knowledge and skills.
- b.** The program of study starts with broad foundational knowledge and skills and progresses in specificity to build students' depth of knowledge and skills.
- c.** Content and standards within the program of study are non-duplicative and vertically aligned to prepare students to transition seamlessly to the next level of education.
- d.** The program of study sequence leads to one or more recognized postsecondary credentials, including industry certifications, licenses, apprenticeship certificates, postsecondary certificates and degrees.

The concept of a program of study has been instrumental in the transition of CTE from narrower vocational training to a broader education system that prepares students for college and career. At the heart of the program of study is the horizontal integration of the three domains of CTE learning — technical, academic and employability knowledge and skills — with the vertical alignment of learning within and across education levels.

High-quality programs of study are built on standards and curricula that progress from more general, introductory content to more specific, focused learning as students deepen their knowledge and skills in a particular career area. This process of cumulative learning should be apparent within each course and in well-defined course sequences that build on each other, even when students transition to another institution or learner level. This sequencing requires extensive coordination among administrators and instructors in order to maximize alignment and minimize duplication.

Progressive, sequenced learning applies not only to the traditional credit-based education model but also is a natural fit with competency-based education models that focus on skill mastery at the student's own pace.

- e. The program of study allows for multiple entry and exit points that incorporate recognized postsecondary credentials.
- f. Students in the program of study have opportunities to earn credit that articulates to the next level of education, such as through dual or concurrent enrollment programs or stackable credentials.
- g. Secondary and postsecondary CTE staff collaborate regularly on course sequencing, vertical alignment and opportunities for credit transfer agreements.
- h. The program of study is coordinated with broader career pathways systems, as defined in the Workforce Innovation and Opportunity Act, as appropriate and available.

High-quality programs of study are committed to facilitating students' transition to the next level of education, not only through sequential curriculum but also through opportunities to earn articulated credit. This may include high school students earning postsecondary credit through dual or concurrent enrollment, Advanced Placement or International Baccalaureate, as well as adult learners being able to articulate credit from non-credit or basic skills programs to for-credit programs, among other examples.

In addition, high-quality programs of study culminate with recognized postsecondary credentials and frequently incorporate credentials at appropriate points along the way. The credentials available, and the appropriate timing for award of those credentials, will vary based on career area, length of program of study and number of institutions/learner levels involved.

Whenever possible, CTE credentials should be stackable so that learners have tangible markers of the knowledge and skills they've gained. This helps students who continue their education without interruption as well as those who step out to participate in the workforce before returning. For instance, Los Angeles Trade-Technical College's renewable energy program enables students to move from a certificate in energy systems technology fundamentals to more focused certificates in areas like solar panels, solar thermal, and weatherization and energy efficiency, to associate degrees in those areas of emphasis.

Effective sequencing and articulation require consistent collaboration among secondary CTE, postsecondary CTE and, frequently, adult education instructors and staff as well as the broader stakeholder community. Practitioners must have time, resources and support to carry out this collaboration, as further described in the Prepared and Effective Program Staff element of the ACTE quality framework.

In addition, when possible, the program of study should be integrated into broader career pathways systems that combine education with support services to help students succeed while responding to state or regional workforce needs. As a local CTE educator or administrator, you may not have the power to ensure that your program is part of a career pathways system. However, you can demonstrate to those in authority the benefits of such a system. The ACTE quality framework is one piece of evidence you can use to make your case.

### Success Strategy: Dual-credit Faculty Liaisons

Oregon's Portland Community College (PCC) is facilitating high-quality dual-credit programs through faculty liaisons. PCC offers tuition-free dual-credit courses in academic and CTE subject areas, taught by qualified high school teachers on the high school campus. The faculty liaison's role is to support high school instructors teaching PCC dual-credit courses and the sponsoring PCC department to ensure that the high school course

aligns with the college course. Liaison activities include curriculum development, syllabus review, high school classroom site visits and professional development.

### Learn More and Assess Your Programs

Practitioners can turn to ACTE's High-quality CTE Tools online library for publications, guides and toolkits on programs of study and career pathways. Resources within the Sequencing and Articulation section share case studies of effective pathway programs, innovative approaches to dual enrollment and credit, and guides and toolkits for implementing and assessing the quality of programs of study and career pathways.

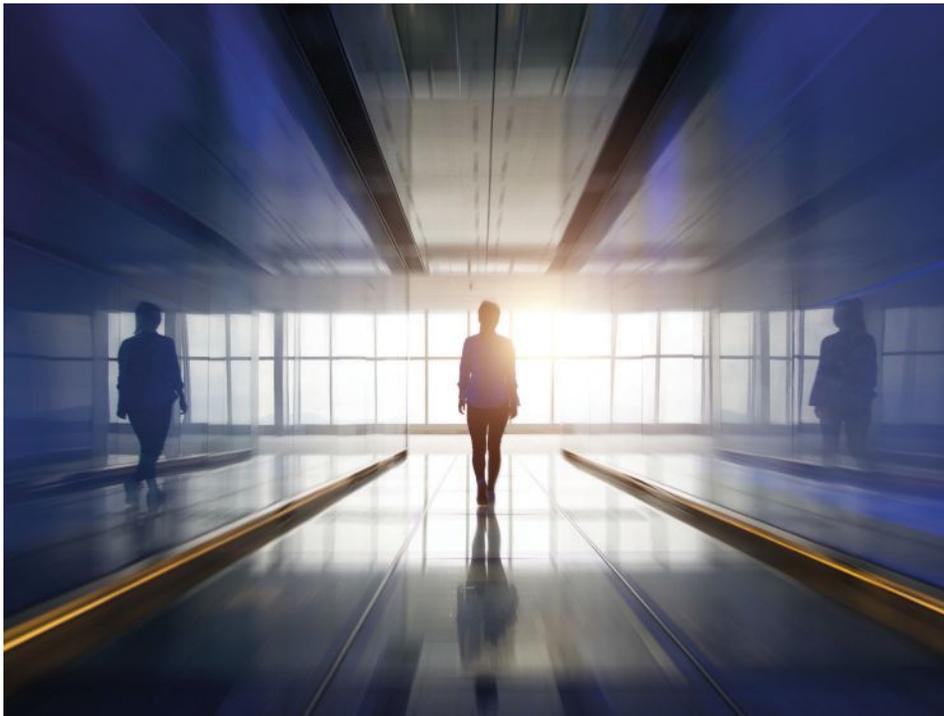
In addition, practitioners can use the *Quality CTE Program of Study Framework Self-evaluation Instrument* to assess a single program, or multiple programs across a district or institution, in relation to the Sequencing and Articulation element and all 12 elements of high-quality CTE. The rubric can be completed on paper or online, where users can receive automatically calculated scores, save and print their results, and be connected to the online library for areas identified as needing improvement. ■

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### EXPLORE MORE

High-quality CTE Tools Online Library: [www.acteonline.org/high-quality-CTE](http://www.acteonline.org/high-quality-CTE)

*Quality CTE Program of Study Framework and Self-evaluation Instrument:* [www.acteonline.org/high-quality-CTE](http://www.acteonline.org/high-quality-CTE)



# A PATHWAY INTO LEADERSHIP

By Torrie Costantino

## TWO YEARS AGO I WAS JUST GETTING STARTED IN THE WORLD OF HIGHER EDUCATION. I WAS FRESH

out of college with two liberal arts degrees hoping to land a job where I could make a difference. I went through interview after interview with no success until I was hired at Utah Valley University; it was then that I was thrown into the world of career and technical education (CTE), as the university's pathways coordinator.

I spent the first year of the job learning about the university, going to conferences to learn as much as I could about CTE and pathways from others around the country. What pathways mean, how to implement

them, and what we could be doing better as a university and as a region. As my understanding grew, my confidence grew. And now, as I start my third year in the position, I am a confident leader in career and technical education for Utah Valley University.

## Pathways

The role of pathways coordinator at a school is a bit ambiguous. The definition of pathways changes depending on whom you are discussing it with. The school in question may just be developing a pathways program, and they may not yet have a whole lot of long-term

vision. When I came into the position, it was brand new and I really had to learn for myself what was needed and what my role was within the university. I didn't know what pathways were or what our school was doing with them until I started spending time with the departments that first fall semester.

While talking with and listening to more than 20 departments at Utah Valley University, I found a cognitive dissonance. No one had the same idea or understanding of what they wanted pathways to be. Two years later, slowly but surely, things are changing. As I interact more with staff and faculty, their perception evolves as I continue to be an advocate for career and technical education pathways. I encourage them to ask me questions and facilitate discussions around new ideas. If they want to create a new pathway, we work together to make the student educational experience enjoyable and efficient.

## Perspective

Unlike many university faculty whose work centers around their own departments (e.g., their degrees, faculty members, cost of supplies), I have a much wider viewpoint. As pathways coordinator I have to look at the whole path; my work begins when high school students take concurrent enrollment courses and continues through their completion of an associate or bachelor's degree. I must consider how every department a student comes into contact with will play a role, and the ways in which chosen pathways will fit into their life and current situations.

The educational system is shifting to better fit industry needs and the needs of nontraditional students. In this line of work I try to remember all of the possible barriers to entry a student could face while

trying to pursue postsecondary education. If a student has two kids and is working to afford a degree, they have to consider daycare, working full or part time, and finding classes they can fit into their current schedule. Imagine if a student can only take afternoon or night courses, but the courses they are required to take are only offered in the morning. That student then isn't able to choose and complete that pathway, thus limiting their options.

My work is all about remembering the student and how they can manage life while still attending a postsecondary institution. But faculty and students think very differently; faculty has a job to do, and a student wants to get through school as quickly and economically as possible. Part of what I do involves taking into consideration the differing viewpoints of students and faculty so that I can create a pathway that works for both parties.

### Student Success

The idea for a pathway can come from many different places: a gap in the latest labor statistics, a faculty member with an innovative idea, or an industry with a high need for a particular skill set. Once the idea is formed, it's a good next step to flip your perspective from coordinator back to student; you can then begin to see the possible issues a student could encounter and potential barriers that may arise. It wasn't too long ago that I was a student, and it's easy for me to remember what obstacles I faced. I try to keep those obstacles in mind when thinking about the best options for a student. My goal as pathways coordinator at Utah Valley University is to create streamlined pathways from high school through technical college and into the university. If I'm not consid-

ering the students that will enter these programs, I'm not creating successful pathways for them and, ultimately, not doing my job.

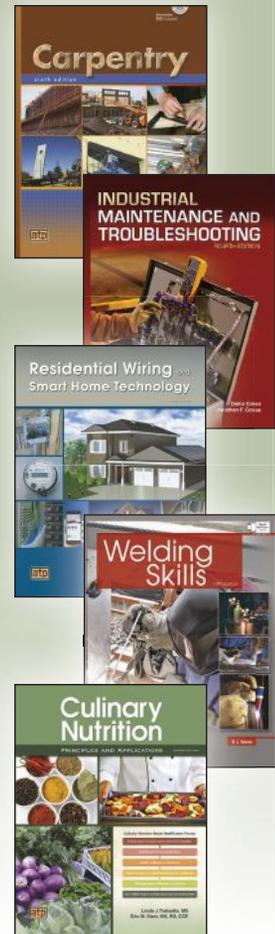
Student success should lie at the heart of every pathways program. Pathways were built and created to help students navigate the educational world into their career choice. My goal, as a first-generation student myself, is to make every pathway available through UVU cost efficient, stackable, and easy to understand for every student and parent. I had no one to help me through the process, so when I create a pathway, I try to do it with the mindset of a high school student. I seek out options that will ensure student success, equipping them to enter the workforce as soon as they are ready, whether at a certificate, associate or bachelor's degree level.

### Three Things I've Learned:

1. I am a leader in training. I will always be a leader in training. I don't believe anyone earns the title of a leader without realizing that they should be constantly learning from their subordinates, colleagues and outside relationships.
2. Listen; listen to everyone around you. Their ideas, comments and sometimes-negative interpretations can help you come up with a solution or a new idea, or they may present an opportunity to grow.
3. Anything is possible, even in education. I love my job because I make a difference. ■

**Torrie Costantino** is pathways coordinator for Utah Valley University. Email her at [Torrie.Costantino@uvu.edu](mailto:Torrie.Costantino@uvu.edu).

Your Partner in Learning



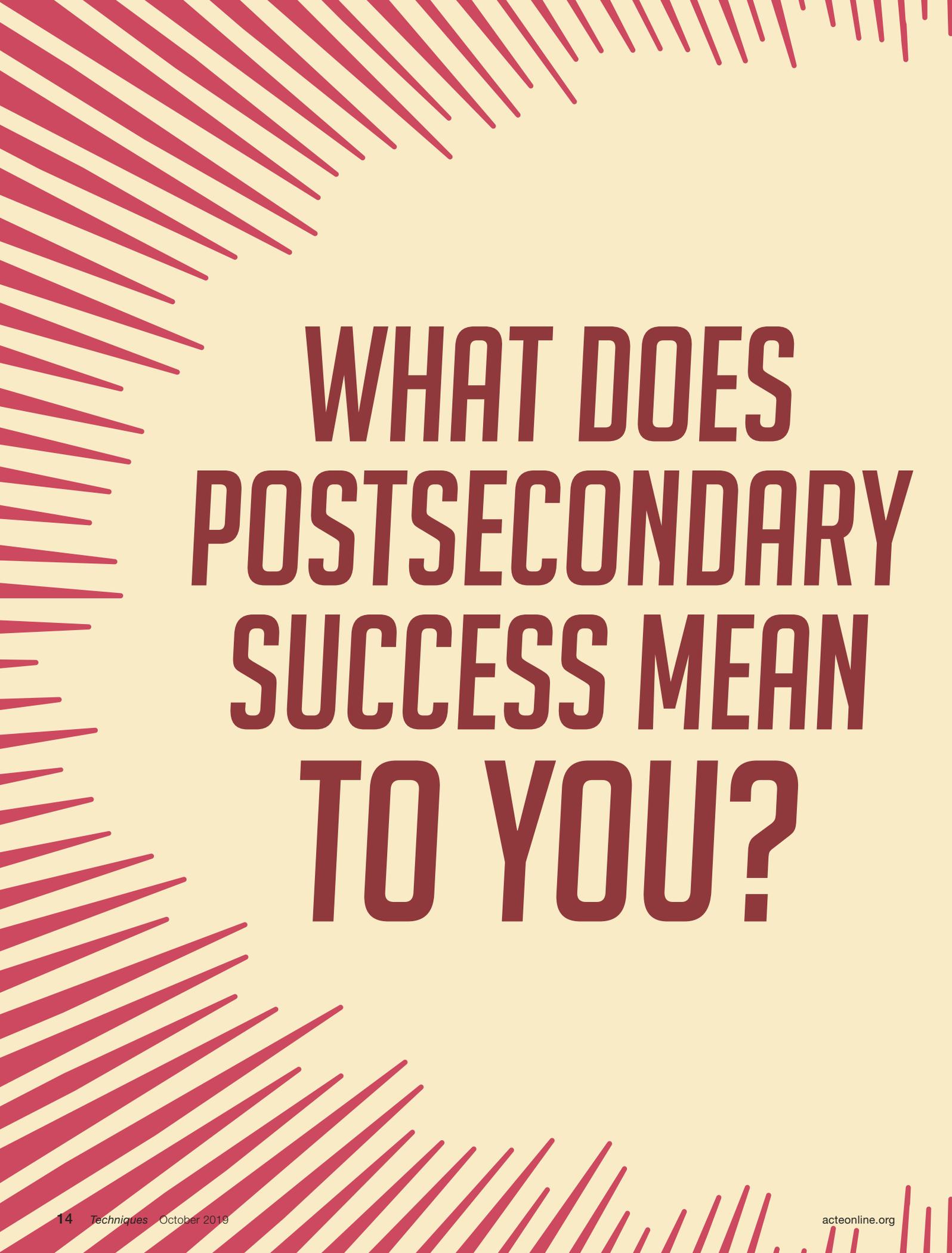
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# WHAT DOES POSTSECONDARY SUCCESS MEAN TO YOU?



**S**

uccess is a universal concept that means something different to each individual. For this issue we asked each of the 20 fellows in the inaugural cohort of the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation to discuss what postsecondary success means to them. Fellows were also asked to discuss the ways in which they felt participation in the program and with ACTE has prepared them to equip their students and communities for success in career and technical education (CTE).

Read on to learn more, and to discover how professional development opportunities like this play a vital role in postsecondary success, in 2019 and beyond.

**Learn more**  
about postsecondary leadership success  
with the PLSP-ECMC Foundation.  
Visit [acteonline.org/plsp-ecmcf](http://acteonline.org/plsp-ecmcf).

## GEORGIA REAGAN

Emily Griffith Technical College



### How do you define postsecondary success in 2019?

To me, postsecondary success in 2019 means that any individual can enter into a program with the support they need to persist, to complete the program and enter the workforce shortly afterward. Postsecondary success should be equitable and available to all students, especially the nontraditional learners who must face more barriers to entry.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

It can be hard to find postsecondary CTE institutions similar to mine, but by being in the program, I have already gained 20+ vital postsecondary CTE contacts that I know I can refer to for thought-sharing and advice. I have been able to work with leaders from other urban schools and brainstorm how we can best support our immigrant, refugee and adult learner populations. Through the program I am working on implementing a holistic admissions process that can reduce barriers that many immigrant students and nontraditional adult learners face upon entry. The PLSP-ECMC Foundation has put a spotlight on postsecondary CTE that is perfectly timed to align with a strong economy for entry into which we can prepare many of our students.

## BRANDON HUDSON

Tennessee College of Applied Technology



Success in higher education, especially in the career and technical education space, can look different for each student. A student could want to further their education at a community college or four-year university after leaving technical college. Another student could want to enter the workforce directly. A student's future plans should not solely determine their success. For many students that attend a technical college, success starts with taking a tour of a school or completing an application for enrollment. Many students are first-generation college-goers; taking that first step takes a lot of courage and commitment. Students that dedicate their lives to school for six hours a day, for 12–20 months, to learn a trade that is needed in their community: They are successful. Student success is evident on graduation day when friends and family pack an auditorium to see their loved one walk across a stage to accept a college diploma earned with hard work and dedication. In some cases, that graduate and family never could have dreamed that they would one day walk across that stage. Success comes when a student takes the steps to change their family's financial and situational outlook for generations.

My participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will allow me to visit and network with other higher education leaders to glean best practices and ideas on improving student success. My main objective in this program is to learn how other institutions and systems implement faculty development and training. Increased faculty development in instructional strategies and planning can only increase student success. Increasing opportunities for student success should always be at the forefront of our decision-making.

I have already made a number of connections through this program that will pay dividends in the future as our institution looks at implementing a more rigorous approach to instructor training, and I am excited about future opportunities to learn from other higher education leaders in career and technical education.

## RACHEL ANDRE

Seattle Colleges of Washington



### How do you define postsecondary success in 2019?

“ All organizations are perfectly designed to get the results they get ”  
–Arthur W. Jones

This quote was shared by Dr. Ricardo Romanillos of the National Alliance for Partnerships in Equity during a recent webinar for the PLSP-ECMC Foundation cohort. Let's ask ourselves: What results did we get this year at our postsecondary institutions? If we take a look, and usually not that hard of a look, we'll see that our institutions are perfectly designed to have inequitable student outcomes. Postsecondary success in 2019 means we have stopped ruminating over the problems, because we often know exactly what they are, and are making moves to turn the system on its head to serve those furthest from educational justice.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

Sometimes it's helpful to take a step out of your own community and examine the state of the postsecondary world from beyond your day-to-day view. You realize that there are different and better ways to do things, and people who are willing to help if you only knew to ask. For me, participation in the PLSP-ECMC Foundation is all about the people and the rich conversations that build a greater context for this work, which I could never have discovered on my own. I'm convinced that learning communities such as this one are absolutely essential to drive innovation and positive change.

## CLAIRE VAN DER PLAS

Colorado Mountain College



Postsecondary success varies from student to student, but I believe it also varies from community to community.

As we are all aware, finishing a degree at our institution is not the only way that students successfully transition from postsecondary education to their next step. They may transfer to another school, complete a certificate but not their degree, or begin working in their chosen industry with some coursework but no completed qualification. Any of these paths can mean success if the student has accomplished what they set out to achieve in their career and their studies.

Success may also look different in different places and communities. Working at a small rural college as I do, one of our concerns is to support local employers and industries by training and educating future employees. This means tailoring our programs to meet local needs; some of our programs are very niche indeed, such as the associate of applied science in ski area operations.

Many of our students have a strong sense of family and community ties. One of my goals for my time with the PLSP-ECMC Foundation, in terms of creating opportunities for access among our underserved populations, is to increase awareness of career opportunities locally in industries that are currently not top of mind for these students. While much employment in the ski industry is seasonal, there are full-time sustainable careers to be had. Lift mechanics, for example, are skilled tradespeople who work year-round and, as with many trades, this group includes an aging demographic; employers are concerned about that trend. Our natural resource management program gives students entry-level qualifications into various careers in our rural mountain region, but also does not currently attract many local high school graduates. I hope to uncover more about the reasons for this, and to work to better inform our communities about local career opportunities.

## NZINGHA WILLIAMS

Central Piedmont  
Community College



### How do you define postsecondary success in 2019?

Postsecondary success is about the holistic success of the student and the institutions that serve them. Students come with a variety of different goals and aspirations. As a postsecondary institution, we must be able to help students achieve their goals. We also must be able to serve the economy and make sure that industries have enough skilled labor. True success comes when there is an intersection between our students, livable wage and economic mobility.

In 2019, postsecondary educators should pay attention to the trends so we can best inform and serve our students. Postsecondary institutions must know who they serve and what our students need to be successful in and outside the classroom. Postsecondary education is also successful when we think strategically about policies that affect our students. Specifically, policies that are outdated and negatively impact our students' success. Postsecondary educators have to be able to have open and honest conversations about barriers that affect our students. These conversations are difficult but necessary for transformational change. It is no longer enough to like the idea of equity or continue to discuss things for the sake of discussing them. We must call a spade a spade so we can transform the lives of our students and our institutions.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

This program has provided a level of exposure that I may not have received anywhere else. This program teaches me the tools to share with my students, so that I can make sure they have the information to make informed decisions about their futures. The ability to understand data and see the trends of the labor market will help when talking with students and the community.

Career success comes when students understand the world of work and the education it takes to get there. It is important to equip students with knowledge to navigate the on and off ramps of education. This includes the underserved populations and the continued need for retention of all students. Underserved populations are attending our institutions, but the key is retaining them from fall to fall, helping them earn certifications, and proper implementation of resources that would help students be successful. The opportunity this program has afforded me will help me to be an informed voice for the students we serve daily.

## DIANA LABELLE

SUNY Broome  
Community College



There is a perfect storm brewing over the CTE landscape in the U.S. today. While there is an increasing demand for highly skilled technicians in the modern manufacturing industry, a large segment of the high-tech workforce is reaching retirement age and, simultaneously, there is a critical lack of youth entering technical careers. Postsecondary CTE will be successful when three things can happen:

- More high school students and adult career changers find a path to CTE
- Current employees can modernize their manufacturing skill set
- Both populations successfully complete their college courses or programs of study

This is an immense challenge on all three fronts. First, there are lingering negative perceptions of CTE. Degree programs in CTE are not well understood and, as a result, many students enter college with deficits in core topics. Both traditional, full-time students and adult, part-time students struggle with math and science. Finally, the layout of most CTE degree programs is not convenient for both full-time college students and full-time employees. Full-time workers considering college usually face financial and scheduling challenges. They want to gain skills quickly but courses are sequential and designed for novices; or they may need that full-time paycheck to support their family; or they may be required to work full-time, or even overtime, while they are taking classes. Full-time college students just out of high school may not have any experience in technical fields and need courses designed for novices. The challenge for CTE is in redesigning their courses and programs to accommodate the needs of both groups.

Through the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation, I have gained a better understanding of the big picture of CTE. Listening to other CTE leaders, I have realized that these challenges are not unique to my college or my locality. I am making direct connections with CTE advocates across the country, and I believe that these connections will be instrumental in tackling the challenges I mentioned above.

## ROSARIO TORRES

MDRC



Higher education is experiencing a swift demographic change. More older students, working students, students with children, first-generation students and underrepresented students are entering higher education's doors. And we have the responsibility to ensure that students' needs are also being met to help push them to the finish line.

Amidst all of this change, there is a lot of background noise about the value and role of higher education in the 21st century. The rising cost of higher education and crippling student debt has forced students to question whether college is actually worth it. This is good news because we need students to be critical about making informed decisions about where they choose to attend college and how much they choose to borrow, and we need to help them understand the financial outlook of their chosen career paths.

As educators, we know of the promise a college education brings and we are increasingly aware of its necessity. With technological advances and automation on the rise, according to the Georgetown Center on Education and the Workforce, two-thirds of all jobs will require some form of high-quality postsecondary degree or credential.

Postsecondary success means equitable outcomes in the postsecondary attainment of underrepresented and nontraditional student groups. Today's students need support to and through college through job placement. I decided to apply to the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation because, as a young leader in higher education, I understand the challenges and complexities facing higher education today. As a former first-generation student and daughter of immigrant parents, I welcome the opportunity to pave paths for others. There are many demands for higher education leaders today and I recognize that, in order to succeed, we need to be informed and we need to have open and honest discussions about diversity, equity and inclusion.

### How do you define postsecondary success in 2019?

Success is defined in many ways: wealth, happiness, a typical 40-hour work week. The definition is fluid, depending on the person. In terms of postsecondary education, success can also mean a 4.0 GPA, or a scholarship for merit or athletics. It could also be sticking with a major after changing it four times. But to define it in a broader perspective, it's obtaining a degree or credential that leads to a career. The world of higher education is drastically shifting to meet industry and student needs, and many colleges are jumping on board with pathways and creating stackable credentials so students have multiple entry and exit points. For a student to earn a programmer certificate: Work for three years and return to complete an associate degree in computer science without having to start over; that's success. To be able to maintain a full-time job as a licensed practical nurse while going to school and building off that knowledge and experience to get the registered nurse license and a bachelor's degree: That's success. Postsecondary success is putting that time, effort and degree to good use after graduation.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

This program has been wonderful because it focuses on three main topics: leadership, policy and professional development. The opportunity to meet with staff within the department of education, presidents of postsecondary institutions and more has shown us what true leadership can be, and has provided us with possible mentors from whom to learn and grow. We've had the chance to focus on policy and attend governance meetings, opportunities that offer a broader perspective on the procedures necessary to keep a CTE program running smoothly while developing and changing policies. The program has provided every possible chance for professional development from day one. Whether it's a webinar, a trip to Gateway Technical College or a yearlong book study, every moment is a chance to learn something.

Furthermore, PLSP-ECMC Foundation has created a network of people with whom to ask questions, explore new ideas, and develop connections with postsecondary CTE individuals throughout the nation. We now have the ability to learn and grow from each other, not just as professionals but as people. Each and every person in this program has their own unique story about how they came into CTE. It provides us a chance to grow as professionals and learn from each other by sharing our narratives.

## TORRIE COSTANTINO

Utah Valley University



## CARRIE SCHEIDERER

Central Ohio Technical College



Postsecondary success comes in many different forms. Students can attend a traditional two- or four-year institution to obtain degrees and credentials, but they also have the option in Ohio to attend an Ohio technical center, which houses our adult education programs. The focus should be on the student's career goals and career pathway following graduation. Too many times the conversation starts with "Where are you going to go to college?" Really the conversation should be, "What are your career goals?" Career goals and alignment should always be the primary focus.

In Ohio, the Department of Education's strategic plan is focused on "One Goal," ensuring that Ohio will increase annually the percentage of high school graduates who, one year after graduation, are enrolled and succeeding in a post-high school learning experience, such as an adult CTE program, an apprenticeship and/or a two- or four-year college; serving in the military; earning a living wage; or engaged in a meaningful, self-sustaining vocation. Our Ohio Department of Higher Education is also focused on Attainment Goal 2025 with a goal to see 65% of Ohioans aged 25–64 obtain a degree, certificate, or other postsecondary workforce credential of value by 2025.

This year, I've had the honor of participating in the inaugural cohort of the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation. As part of the program, I've been able to learn and grow from my experiences with postsecondary leaders from across the country. Through my interactions with our cohort members and participation in our monthly webinars, I've been able to obtain a lot of best practices and new ideas that will help me prepare 21st century learners for career success and increase access among underserved populations. This professional development is key as equity and access for all students is coming to the forefront in legislation such as Perkins V.

So as we lead the next generation to postsecondary success, let's focus on career pathways and goals versus the location of the training or degree. Career success is key to our local, regional, national and global economies and, as we train our next group of leaders, let's work toward credential and degree attainment based on careers.

### How do you define postsecondary success in 2019?

Postsecondary success in 2019 and beyond is all about flexibility, data-driven decisions, employer partnerships, affordability and personalized attention to the underserved population. Simply put, CTE is not just about education but rather about equipping learners and graduates with employable skills to change their circumstance while bettering themselves and their families. Unfortunately, many minority, low-income and first-generation students as well as individuals over 25 face barriers to high-quality, postsecondary education options that provide a living wage. We must remove the barriers so that these individuals have the opportunity to be successful.

If we work together to break down these barriers, ensuring that all students entering postsecondary career education have what they need to obtain a degree and a middle-class job, we can build an economy that is more equitable and provides our local businesses with the skilled workers they need to succeed in the 21st-century economy.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

I have a great passion for career and technical education, having spent the majority of my career in the postsecondary education space. Beginning my journey teaching at-risk high school youth in the federal TRiO program has allowed me to have a profound beginning to my career in CTE. Throughout my life as a first-generation college student, my family has instilled in me the value of education and what it can do to change one's circumstances. Although there were no CTE options for me when I graduated high school, I knew I could better my path with postsecondary education. CTE, more than any other form of education, is about changing the communities where we live and work. To be successful, we must advocate, select, support, guide, train, coach and place learners who choose CTE.

The lack of visibility to CTE as a viable postsecondary option is most often apparent in those from predominantly rural and/or urban environments where a traditional four-year college education appears to be the only option. We must advocate for these learners, their communities and their ability to change their circumstances.

As a participant in the PLSP-ECMC Foundation, I believe that I will be offered great opportunities to further the discussion and advocate for CTE, while enhancing my knowledge, leadership and ability to forge partnerships for the CTE journey. Through consistent collaboration, thoughtful participation and advocating with key constituencies, I hope to further develop a positive perception and overall priority of CTE for students, families and the community as a whole.

## JACOB KASSUBA

Zenith Education Group



## FRANK POLEN

Buckeye Career Center



I think you can define postsecondary success in the phrase “difference maker.” It is our mission, as career and technical educators, to help people discover their passion and prepare for their future by either enhancing a skill set or helping them to learn a new skill altogether. Postsecondary success, in my mind, is measured by the ripple effect; a highly skilled person enhances their community, leaving a lasting impact and making a difference in the lives of others. Service is another term I would use to define what success looks like in postsecondary education. The more prepared we are and the more willing we are to serve others, the better we all will be.

Skills needed to prepare 21st century learners will be enhanced through my participation in the PLSP-ECMC Foundation. Being exposed to nearly 20 other unique perspectives and learning new and exciting ways to create opportunities, especially in areas that are currently underserved, will greatly enhance my world in preparing students for long-term career success. A big part of leadership is to help recognize and eliminate roadblocks and barriers for all people.

A chain is only as strong as its weakest link; a community, a workforce, a nation succeeds by these principles as well. Working on ways to say yes, to provide affordable, high-quality education and in-demand skills training that leads not just to jobs, but careers: These are areas in which I hope to grow. A better trained workforce, combined with ample opportunities, is really the American Dream that is still very much alive. The lesson that appeals to me most is to develop and maintain a vast appreciation for what you have, both in potential opportunities and reality.

## LYNNE McCOY

Bossier Parish  
Community College



### **How do you define postsecondary success in 2019?**

I believe postsecondary success is unique to each student’s life situation and goals. By many of today’s measurements I might be considered a college dropout, or maybe I was not even considered a college student worth measuring?

When I started at my local community college in January 1976 I was a senior in high school. By May of that year I was working full-time as a bookkeeper. My goals were to move up in the organization. I have worked full time since I was 17 and attended college on a part-time basis. It took me six years to earn my associate of applied science in accounting from Mesa Community College. Was I less successful than my friends that went directly to the university? Maybe, maybe not. I had a full-time job and was promoted to a supervisory position while many of them were looking for their first entry-level position. I met my goal to move up in the organization, and was provided the opportunity to earn my bachelor’s through a tuition reimbursement plan with my employer. It took another four years attending school part time during the fall, spring and summer to earn my degree. My education and career goals changed over time. Life events change the perspective and goals set when one is 17 years old. Now I possess a master’s plus 30 graduate hours, all earned on my timeline. I believe I have achieved postsecondary success in a way that allowed me to meet my unique individual and family goals.

### **In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?**

Participation in the PLSP-ECMC Foundation is helping me refine my critical thinking, leadership and organizational skills through collaboration and communication with others of influence in postsecondary education. We have had the opportunity to have insightful monthly webinars to explore and discuss current and best practices. We have been able to build a network of colleagues from institutions across the United States that are dedicated to self-improvement, institutional change and improved success, however that is measured, for all.

## DEANNA LITTLE

Meridian Technology Center



Postsecondary success is when all students graduate with the academic and technical skills needed to obtain employment in their area of interest, contribute to society and develop a sense of purpose and pride in themselves. Postsecondary success occurs when workforce education and industry needs are aligned. Career and technical educators and local employers must work together toward this common goal. As CTE professionals it is our responsibility to ensure employers in our area are actively involved in our programs. This goes beyond the annual advisory committee meeting held every year. Working together to review the program curriculum and identify skill sets that will align with multiple entry points for employment can be critical to meeting workforce needs.

I recently sat down with some new postsecondary graduates to discuss their future plans. Some of them had earned a technical certificate, some a two-year degree and some a four-year degree. They were all looking for jobs and expressed frustration navigating the online application processes. They wanted to know how they can get noticed in the digital job market. Their skills matched several job descriptions, but they were all lacking the years of required job experience. As educators, we must strive to continue to build our stackable credentials and ask our local employers to align their positions in a similar manner by allowing multiple entry points or changes in pay scale based on levels of experience that could help new graduates have the opportunity to showcase their skills.

By having these conversations with industry you can help students find more employment opportunities, which ultimately leads to the goal of postsecondary success.

## DOMINIQUE FOOTES

University of the District of  
Columbia Community College



### **How do you define postsecondary success in 2019?**

Postsecondary success means many things to me. It goes well beyond academia and even student engagement. It means that postsecondary institutions are aware and engaging with the individual communities that they serve. There is strong collaboration and creation of partnerships with businesses and community organizations to ensure that the programs and services offered are relevant and up to date. Lastly, postsecondary success means that we have given our students the necessary education, experiential learning opportunities, and skills to be vital contributors and catalysts within their communities.

### **In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?**

I am finding my participation in the PLSP-ECMC Foundation to be valuable in my professional and personal life. I believe this program has allowed me to have deeper and richer conversations about CTE persistence and completion with others in my cohort. It has been interesting, gaining their perspectives and learning about their individual institutions and programs. I also feel like I have developed a stronger network of people that I can utilize as resources as I try to navigate some of my own institutional challenges with career and technical education.

I also found that having the time to reflect on my own work, based on frameworks presented in the readings and themes, has been beneficial. I think taking the time to do research, write reflections and actively engage regularly has inspired me to think and act more intentionally as I serve our student populations. It has also provided me with an opportunity to think about my future and continue to develop myself.

Some of my dual enrollment students are aware of my participation in the program. They occasionally check in and ask me about it. It's been a pleasure to share my journey in this program with them (and my colleagues at my institution) throughout the past couple of months.

## SHARNEE' HOBBS

Bishop State  
Community College



Postsecondary education is a gateway to success. More importantly, it is a bridge to employment. This is especially true for GED/adult education students. Today, we offer so much more than a certificate. Postsecondary offers career pathways for all students, traditional and nontraditional. Adult education students have the opportunity to improve academically and earn skills to prepare for the workforce. Community colleges provide short- and long-term certificates that are specific to the needs of their community. Bishop State Community College is no different. Welding, culinary arts, CNA, phlebotomy, forklifting and truck driving are some of the many choices adult education students have in postsecondary education. Postsecondary is here to change lives and make a positive impact in the community. Every student that takes the initiative to enter postsecondary has opened the gateway to a promising future.

Working in adult education gives me access to a specific population of English language learners (ELLs). Many ELLs come to our programs with hopes of increasing comprehension of English. We have so much more to offer. My inclusion in this program has motivated me to place emphasis on enrolling ELLs into existing career pathways and to also create new pathways. One of my goals during my tenure as a fellow in this program is to gather best practices from the other fellows. Each fellow brings a unique perspective on postsecondary education. At the core, we each have one common goal: student success. PLSP-ECMC Foundation has created an environment that can only result in success and development in leadership amongst all fellows. As for me, I have gained so much. I now have a mentor, Dr. Victoria Seals, who has provided wonderful pearls of wisdom that I will cherish forever. In addition, I have the confidence to develop partnerships with industry leaders to create successful programs for my students.

## JEFF HENDERSON

Indian Hills  
Community College



### How do you define postsecondary success in 2019?

Postsecondary students define their success with gainful employment. This success is further defined with employment in the career field of their completed CTE program. College students graduating in 2019 do not differentiate between a certificate, diploma, or associate degree and a four-year university degree. Students see all three postsecondary awards as college degrees. The current employment climate is increasing the importance of short-term certificates to prepare students for a quick career start with less expense. Career and technical education provides this opportunity sought by students and employers.

Postsecondary institutions measure success in 2019 differently than their customers do. Business, community and governmental stakeholders require more indicators of success beyond gainful employment. Program completion and assessment verifying the transfer of knowledge are critical components of postsecondary success in 2019, included with gainful employment.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

CTE is a crucial component for preparing a trained workforce. Our governmental leaders and an ever-increasing general population recognize this fact. The PLSP-ECMC Foundation will help mold the CTE leaders needed for this changing climate. The program is vital, bringing together CTE professionals across the nation to share ideas and best practices. ACTE has been creating networking opportunities for years, but is now focusing on postsecondary leaders. The Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation provides the vehicle for community college leaders to network across the nation. I personally have gained a new perspective about leadership and on the importance of networking to expand and enhance career and technical education throughout the 21st century.

## ANDREA GOLDEN-POGUE

University of Oklahoma  
Health Sciences Center



One life influencing another. That is the real magic, and it happens in postsecondary education. It's a place where lives are totally changed and sometimes even the ripple effect of training can be felt among the student's family, fellow co-workers, teammates and organizations. Whether it's a certification to become a CNA, a degree to become an electrical engineer, or anything in between, CTE is the answer.

I define postsecondary success as the ability to learn and grow and live into your purpose. Postsecondary success is more than a grade, or a goal being accomplished; it is something bigger than that. It is having the ability to use your education to serve others and to bring people along with you during your journey. We all know that one is too small a number for success, so success is being mentored and mentoring others at the same time.

One direct way that my participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in my work to prepare 21st century learners for career success is to be a better visionary of program ideas and to understand conceptually how to create programs using design thinking. PLSP-ECMC Foundation has helped me learn to create additional opportunities for access among underserved populations through training on how to be more inclusive, to learn from data, and to develop strategies for reaching new market segments. I am better equipped now to understand the data and relate those findings to my supervisors and peers in the future. Marketing CTE and developing a deeper understanding of challenges faced by minorities who wish to attend CTE: These are two of my biggest lessons learned during this program. Access is critical in CTE if we are really going to reach people and help them to change their lives.

Through diversity and inclusion of many ethnicities and cultural backgrounds, we can grow the area of postsecondary and take it to even newer and better heights. After all: We are better together!

## HAHLI ROGERS

Lower Columbia College



### **How do you define postsecondary success in 2019?**

Postsecondary success in 2019 begins with partnerships — collaboration between secondary CTE programs, postsecondary CTE programs and employers. These partnerships are necessary to assist youth and job seekers to fill open positions and find career success. Postsecondary providers are in a unique position to serve as the catalysts between secondary CTE programs and employers. Using CTE dual credit articulations and programs of study to align education and skills training with employer needs. Creating clear, easy-to-access pathways that begin in high school, feed into postsecondary training and lead to successful employment in family-wage careers. This starts by creating a space where students, teachers and employers can come together to identify skills and training that will build a workforce that creates economic growth and prosperity. Programs that are rigorous in curriculum, relevant to work done in the field, and supported through relationships developed through advisory committees driven by local employers.

### **In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?**

The PLSP-ECMC Foundation is providing me with training and exposure to professionals that I would not have access to normally. Building my professional network across the nation with people from all levels of influence — including legislators, policy writers, practitioners and supporters. Each of these groups of people raises my level of knowledge and awareness of the opportunities and challenges that educators and students face every day. It is through these relationships that I am able to strategically align my work plan for my organization with larger initiatives and goals. This critical alignment creates opportunity for my local and regional partner projects and opens up opportunities for our students and job seekers through training and education. Allowing southwest Washington to focus on postsecondary success — for students and educators — now and in the future.

## CRYSTAL LATHAM-ALFORD

SkillsUSA Texas Postsecondary



I feel that success is defined by a willingness to learn new things, being intentional about conversations, and cultivating industry partnerships. Participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation has aided in my work to prepare 21st century learners for career success.

In our constantly changing reality, desire and willingness to learn is a vital skill for achieving any kind of success in career and business. I have learned over the years that change is inevitable. In life we are all looking for a better way to do things, whether it be to improve efficiency, keep up with technology, or even just to stay competitive in the market.

During my trainings in PLSP-ECMC Foundation, I have worked on being more intentional. To start with: asking the right questions, knowing when to have the one-on-one conversations or roundtable discussions, knowing your approach to a conversation prior to the meeting. After a programmatic discussion about good and bad questions, I became more self-aware. When a Q&A arises, do I ask questions during the right time? With that self-evaluation, I am better prepared for meetings with staff.

When cultivating industry relationships, first and foremost, keep it simple. In our business we often have only a few minutes to make a big impact. Lead with your mission and get to the point, so that you can lead into longer meetings in the future. Also, having the tough conversations about money, employment, visions and participation can be very nerve-racking. I have learned over the years, and I continue to learn, that people will respect you more if you are honest and to the point. We all have a job to do; stay positive and true to your mission. Whether you want to admit it or not, we are all salespeople. We are selling education, future success, and our process, so let's make our conversations matter.

Principles of leadership and education are rapidly changing in the world. Staying ahead feels almost impossible. With support from organizations like ECMC Foundation and ACTE we can continue to grow to become better leaders in our jobs and communities. I hope everyone gets an opportunity to join a program like this in their career. It opens up your mind to possibilities and ideas to better help you succeed.

### How do you define postsecondary success in 2019?

So much of past research defines postsecondary success in terms of academic attainment and economic security, but alone they are not enough; those measures are too materialistic in isolation. It is 2019; success needs to be looked at holistically. Imagine a woman coming home: She feels proud of the work she put into constructing a home for members of her community; she smiles at the construction management certificate on the wall as she walks in the door of the home she owns. All the bills are paid, and there is money in the bank for her oldest child's prom dress. She sits down to play a game with her son before they start making dinner, and she is happy. That is success.

Success is not a competition; if her neighbor is an accountant with a master's degree and a bigger paycheck, those things don't automatically make him more successful. Part of postsecondary success is economic security but there is more to it than that. Postsecondary success can also be found where educational attainment aligns with career and personal goals, and in feeling your contributions make a difference. Ultimately, postsecondary success is an amalgamation of personal fulfillment, economic security and satisfaction.

### In what ways do you feel your participation in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation will aid in your work to prepare 21st century learners for career success and/or to create opportunities for access among underserved populations?

As I continue to learn alongside the other fellows in the Postsecondary Leadership Success Program at ACTE – Sponsored by ECMC Foundation, I am building new connections, both literal and figurative. These connections aid me as I work to prepare 21st century learners for their futures.

I find myself asking, "What would so-and-so do?" when looking at ways to improve the outreach I work on. I refer back to the notes and recordings from our discussions as I struggle to work through problems. As we go through this journey together, I think the fellows would all agree there is not one simple answer to the ways in which we are being enriched; we are connecting ourselves, our work, and our futures. ■

## BRYANNE PETERSON

Virginia Tech

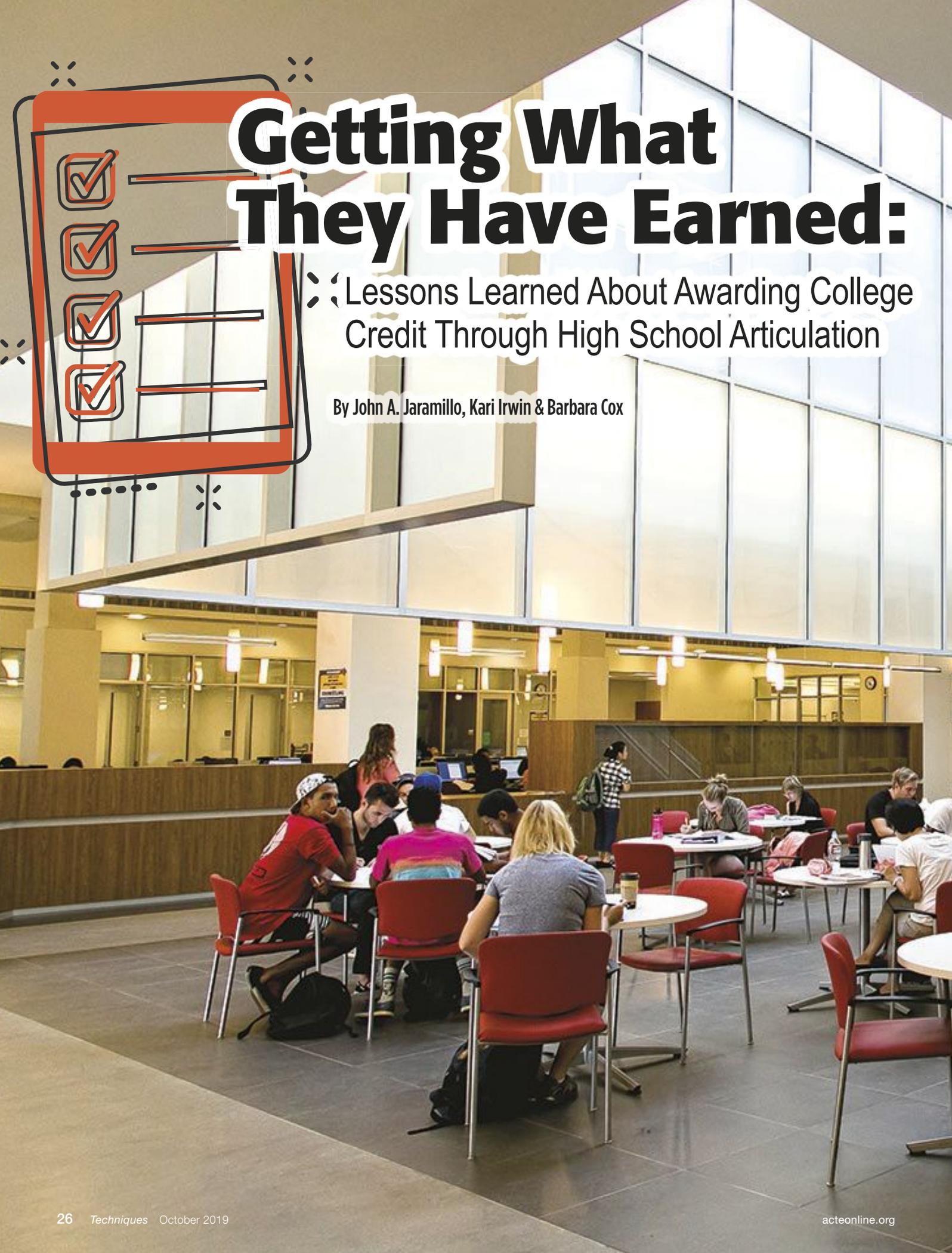


**The PLSP-ECMC Foundation is a yearlong professional development experience intended to develop the organizational leadership and management skills of postsecondary CTE professionals; apply to be a part of the next cohort! Applications are due Dec. 15. Learn more at [acteonline.org/plsp-ecmcf](http://acteonline.org/plsp-ecmcf).**

# Getting What They Have Earned:

Lessons Learned About Awarding College Credit Through High School Articulation

By John A. Jaramillo, Kari Irwin & Barbara Cox



**I**n California, as in other states in the U.S., colleges have long had processes for awarding postsecondary credit for high school courses through articulation, but the degree to which this articulation makes a difference in career and technical education (CTE) may be significant.

While the processes for earning credit are generally in place, several key challenges related to the actual recording of earned credit on an official college transcript with a letter grade persisted. This article will highlight the implementation of a newly developed system engaging high school and community college faculty; high school and community college administrators; high school and community college classified staff; high school and community college district boards; and, of course, the students themselves. The process, requiring close interaction and collaboration by all key stakeholders, has been instrumental in creating an effective program of course articulations.

### Background: Saddleback College

On Valentine's Day in 1967, residents of the rural southern area of Orange County, California, approved the creation of a community college, dubbing it the "Sweetheart of South Orange County." Less than one year later, Saddleback College was ready to welcome 1,546 freshmen for the start of the

fall 1968 quarter. Now, over 50 years later, thriving suburban communities cover the hillsides where cattle used to roam, and Saddleback College serves the southernmost part of Orange County, a diverse and vibrant community of students ranging from toddlers to centenarians.

Since our establishment, Saddleback College (2019) has experienced a dramatic growth in enrollment — from its humble beginnings to an annual student enrollment over 41,000 strong. Saddleback College has become an integral part of the south Orange County landscape, linking education with community growth and vitality. Saddleback strives to improve the transitions from feeder high schools to the college campus. To develop pipelines of talent that will sustain a skilled workforce, Saddleback College faculty collaborated to complete and sign more than 155 high school course articulation agreements with secondary CTE partners. Despite this effort, however, the number of students who applied to receive college credit remained low — often fewer than 50 students per year.

Given these low numbers, combined with the importance of accelerated progress toward completion of a certificate or degree, the California Community College Chancellor's Office and the Board of Governors issued changes to facilitate and streamline the statewide process through which eligible high school students apply

for and receive earned high school articulation credit at community colleges. However, given the California Community College system's composition of 72 separate districts with 115 colleges, implementation success has been anything but consistent. Committed to meeting the directives of a seamless transition, the college's first focus would be articulation. Challenges surfaced: College residency requirements, incompatible IT systems, faculty and staff functional differences, and certain board policies would all need solutions.

### Challenge One

Since 2016, the California Community Colleges Chancellor's Office (2019a) has increased its emphasis on acceleration of student progress toward completion of a college degree and/or certificate. Also, much of our funding, and particularly categorical funding (e.g., Career and Technical Education Transitions and California Career Pathways Trust Grant, Strong Workforce, Guided Pathways and College Promise Initiatives, Perkins IV, among others), was increasingly tied to development and completion of pathways. Most recently, the state community college system as a whole shifted toward a performance-based model in which primary funding is tied to student completion and success measures (California Community Colleges Chancellor's Office, 2019b).





High school articulations have potential to increase enrollment and completions in formal CTE pathways and, by doing so, improve the college's position vis-à-vis the state funding model. While this sounds optimistic, the demographics of south Orange County indicate that the number of high-school-aged students (and, hence, high school graduates) will decrease (South Orange County Economic Coalition, 2019). How can we ensure that enrollments increased through articulation are not lost through population decline? College faculty can take advantage of the opportunities provided by articulation processes to connect with high school instructors, building institution-to-institution collaborations to develop pathways for first-generation students or those who may have been historically underrepresented in postsecondary education.

We also knew we needed to remain competitive with other community colleges in Orange County; more than building additional agreements, we needed a way to ensure the students received the academic credit they earned and that the credit was portable and permanent.

### Principles implemented in the CATEMA system

- Make the system easily accessible to everyone in education
- Validate all data at the point of entry to reduce entry errors
- Minimize the tasks necessary for the students, teachers, and system staff
- Provide easily accessible and printable data in detail & summary reports
- Assure data is accurate and secure, with separation of student, teacher, and school information

## Challenge Two

Board policy directed that a local residency requirement be met at Saddleback College, thus prohibiting the award of credit until 12 units of coursework were completed at our college. Additionally, at that time, no letter grades could be awarded, only credits. We would need to change those policies. What followed was the foundation of a dedicated workgroup comprised of admissions and records staff, career and technical education faculty and staff, outreach, and faculty senate members from Saddleback College and Irvine Valley College. We met monthly to review, discuss and agree upon proposed changes to language in two of our board policies and administrative regulations. Both colleges proposed that the South Orange County Community College District's (2011) administrative regulations (AR) be adjusted to align with the Board of Governors requirements. The change that required the most collegial consultation was the change in awarding a letter grade, which was proposed in SOCCCD AR 5618 and AR 6110, as follows:

- *Adhere and align to articulated college course grading policies and provide high school students with a letter grade on transcripts – not only a blanket “P” or “NP.” Currently, high school course articulation terms allows for only a “P” or “NP” grades to be posted on transcripts for HS CTE articulation credit*

The South Orange County Community College District Board of Trustees approval followed in spring of 2018.

## Challenge Three

To create an effective CTE high school course articulation agreement, we needed a forum to bring together faculty from the high schools and the college to discuss course content, assessment, evaluation, academic rigor, learning outcomes and pedagogy, among other details. In California all curricula in our community colleges are in the purview of college faculty. College faculty in partnerships with high school teachers determine whether an agreement should be developed; assure adherence to California Education Code and Title V

requirements; and determine awarding of a grade through recognized processes such as credit by exam or assessment. To ensure these discussions took place, Saddleback instituted and holds annual articulation workshops with college and high school faculty, staff, and administrators.

In short, Saddleback program discipline faculty develop and sign a high school CTE Course Articulation Agreement after:

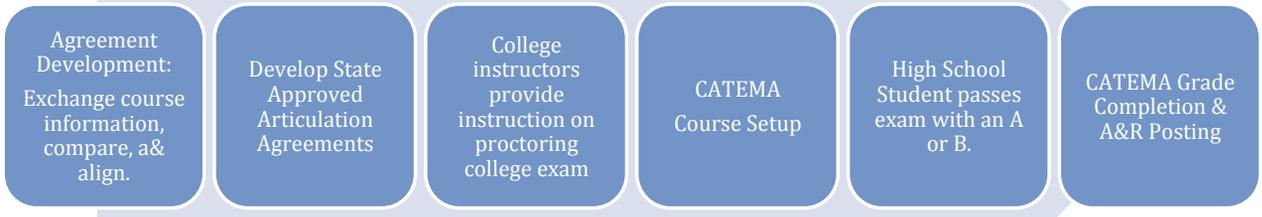
1. Verifying that the respective course outlines are equivalent
2. Connecting personally with the high school counterparts to review and discuss all aspects of the proposed articulation
3. Determining that assessments and requirements for ensuring academic rigor are maintained at agreed-upon levels to ensure learning is equivalent

Mary Anstadt, grant manager of Career Pathways and former CTE transitions specialist at Saddleback College, worked with our high school partners to formalize and build our articulation support system. Generally, all high school articulation agreements use the SOCCCD Credit by Exam process. These agreements are reviewed and reapproved at all levels every two years.

## Challenge Four

How do we ensure that high school grades are recorded onto official college transcripts? The Career and Technical Education Management Application (CATEMA) to the rescue. The CATEMA system, a tool for monitoring and tracking high school articulations and eligibility of students to receive college credit, helps students understand that an articulated course is a college course and will require substantial effort to meet college-level rigor.

In 2016–17 Saddleback College conducted its first CATEMA pilot with 899 high school students, where 748 were recommended for an A or B credit. In 2018–19, nearly 1,800 students participated; more than 1,500 were recommended for credit and 1,263 course completions awarded credit. We have come a long way from 30–50 students in the early days.

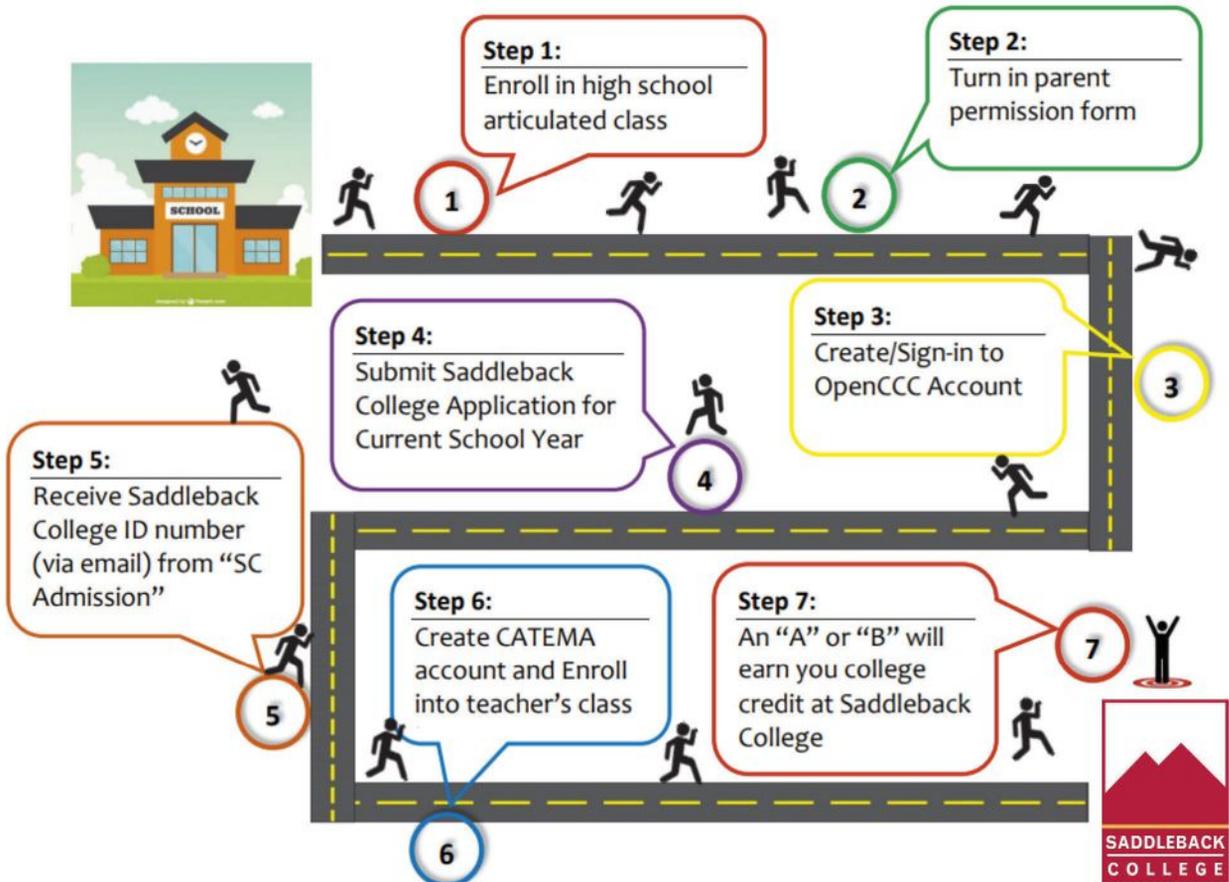


**SADDLEBACK COLLEGE ARTICULATION PROCESS**



**SADDLEBACK COLLEGE CATEMA PROCESS FOR K-12 TEACHERS**

**CATEMA Process for Students**



**SADDLEBACK COLLEGE CATEMA PROCESS FOR K-12 STUDENTS**



# Getting What They Have Earned:

Lessons Learned About Awarding College Credit Through High School Articulation



## Challenges Moving Forward

Even as we worked through these four primary challenges, we encountered more.

1. Our state community college application website experienced delays in processing and assigning student ID numbers. Often the system was slow in creating student identification numbers.
2. The high school classroom equipment had weak/slow internet connections.
3. Scheduling teachers in same districts on block schedules required problem solving.
4. Students would sometimes reject the enrollment opportunities, i.e., would not apply to Saddleback College.
5. Faculty occasionally misunderstood the CATEMA process and system.
6. Faculty presented dissimilar levels of commitment pertaining to classroom management and preparing their students in advance of the enrollment session.
7. Ongoing sustainability of funds and continuation of CATEMA access was not immediately obvious.

Each of these somewhat lesser challenges required follow-through, staff time and, most importantly, professional development. Conducting professional development for K–12 faculty and staff became a regular part of our responsibility. Additionally, Saddleback College Economic and Workforce Development and Business Sciences Division CTE staff closely monitored the CATEMA data reports to ensure timely awarding of grades was consistent.

Not only did we need to offer professional development, but we also needed to ensure we were learning about new and changing systems at work within our district operations. Areas of attention included admission and records' intake processes, outreach scheduling, and information technology structure, limitations, capabilities, and, most importantly, compatibility.

## Outcomes

In the end, we built a successful process. Students received transcripts showing grades and credits earned. In the past year, we reached these successful articulation milestones:

- 9 high school partnerships created or expanded
- 144 total individual course articulation agreements
- 94 total faculty participants attending the articulation workshops:
  - 61 high school & regional occupational program teachers
  - 33 college faculty

In our first three years, we have had the following impact on students:

- 2016–17 (launch year)
  - Number of students enrolled in CATEMA: 899
  - Number of students with credit recommended: 746
  - Number of students with credit awarded: 496
- 2017–18
  - Number of students enrolled in CATEMA: 1,498
  - Number of students with credit recommended: 1,133
  - Number of students with credit awarded: 646
- 2018–19
  - Number of students enrolled in CATEMA: 1,799
  - Number of students with credit recommended: 1,513
  - Number of students with credit awarded: 1,263

Articulated courses have historically offered study in academic preparation areas. Now CTE articulated courses are opening new educational windows to students who may not otherwise consider attending college. Students need not be solely aspiring to four-year degrees, or even two-year degrees, to reap serious benefit.

We're seeing an increase in articulation of CTE courses that support students on their pathways to careers; this focus on workforce development impels us toward enhancing career and technical education courses and programs. As these expand in the college, their numbers in the ranks of articulated high school courses also increase.

## Vision

At Saddleback College, we now challenge ourselves to improve awareness and under-

standing of the CATEMA process. We are assembling a permanent site team to help prepare teachers and enroll students using sustained funding. We understand that we must build a flexible and realistic timeline that allows for students and faculty to obtain and enter their data. We will be continually tweaking our funding model to enable us to increase the number of students who can take advantage of the opportunities we offer. And, lastly, we need to expand CATEMA's initial systematic processes to include supporting data for dual and concurrent enrollment in conjunction with the automated articulation enrollment.

Reflecting back and looking ahead, we will take strength from Maya Angelou who said, "Nothing will work unless you do." ■

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**Kari Irwin** is assistant dean for career and technical education at Saddleback College. Email her at [kirwin@saddleback.edu](mailto:kirwin@saddleback.edu).

**Barbara Cox** is chairperson of the business department at Saddleback College. Email her at [bcox@saddleback.edu](mailto:bcox@saddleback.edu).

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# I Am a Success Because of FCS

By Carol R. Werhan

**S**ince the Smith-Hughes Act of 1917, family and consumer sciences (FCS) have been a part of career and technical education (CTE) in the United States. Some FCS careers once popular are no longer relevant — have you been to your haberdashery lately? Nevertheless, family and consumer sciences-related careers continue to evolve to address the knowledge and skills necessary for success in today's society.

With the advent of the career cluster model, some not familiar with the long history of FCS as CTE have questioned its role in current career preparation vernacular. There is no specific cluster labeled Family and Consumer Sciences, because family and consumer sciences as a profession integrates many different fields of study in order to enhance the well-being of individuals, families and communities. As such, FCS-related careers can be found in most career clusters, and many FCS course offerings are foundational to all career clusters.

Meet three individuals who see their FCS coursework as foundational to their career success and have shared their stories: James Oviatt, workforce management project planner with Walt Disney Parks and Resorts; Alexandra Lozano, a tailor employed by Nordstrom in Chicago; and Maxwell Golden, an undergraduate student in family and consumer sciences education at Purdue University. Recently I had the opportunity to speak with Oviatt, Lozano and Golden; we discussed their pathways of choice, secondary FCS coursework, and the postsecondary education they pursued to launch their careers.



## JAMES OVIATT

**Cluster:** Hospitality and Tourism

**Place of Employment:** Walt Disney Parks and Resorts

**Job Title and Responsibilities:** Workforce Management Project Planner responsible for upgrades to timekeeping systems for more than 100,000 cast members nationwide.

**For my introduction to secondary FCS, I give credit to:** Mrs. Louise Zaki, child development teacher and FCCLA advisor at Beaumont High School in Beaumont, California

**Postsecondary Education:** San Bernardino Valley College, where I completed coursework in communications/broadcasting with an emphasis in interpersonal communications

### How do you define success?

“ Success is finding work that doesn’t feel like work every day. Finding a balance between life and work, and putting in the effort to find the happiness in both, is key. ”

### What foundational skills did you acquire in FCS coursework that helped you achieve success?

Through child development courses I developed an understanding of the many different learning styles and the ways in which we use these tools to success, no matter what age. I have found that taking time to learn how someone learns can be crucial when relating to both your external guests as well as internal co-workers. When a challenge arises, the choice to invest in the person you are assisting — in helping them to grow — can be just as crucial as conquering the challenge itself. Empowerment is a powerful thing.

### What impact did your FCS classes have on your postsecondary education and/or career?

Taking a roundabout direction to my place in the Hospitality and Tourism industry has been a wonderful adventure. I did dream a bit, leaving high school, that I might someday become a game show host, providing contestants with once-in-a-lifetime experiences.

While studying communications/broadcasting in college, I had a wonderful opportunity to explore the realm of interpersonal communications, studying aspects of how we communicate one-on-one as well as in groups.

Teaching skills and methodologies from child development came in just as handy as these interpersonal communication skills when I finally began my career at the Disneyland Resort. I spent seven years in Fantasyland Attractions as a trainer and guest service ambassador, finding fun ways to add value to each of my guests’ days and putting those skills in effectively communicating with children to the test. I spent the next two years as a leader of the dream squad, which involved daily prize giveaways; hundreds of guests received everything from mouse ears to trips around the world. I began to realize... Even without the prize, the true gift I gave was the gift of joy and laughter.

We create happiness every day, and quality time with friends and family. Something needed in the world, and a prize that can be valued even more than that which won on a game show. I continue to use those educational skills and methods to assist our leaders and cast members with various scheduling and time needs.

### Have you used skills learned in FCS in any unexpected ways?

I learned very quickly that an upset adult’s day can be turned around very quickly if you make their child smile. My ability to relate to the children and to inspire a bit of playfulness in the parents was an essential skill learned in FCS courses.

### Any additional story you’d like to share that might be relevant?

A student proudly announced that, after taking my workshop a year before, he was inspired to study Hospitality and Tourism in college. His eyes sparkled as he told me, “I never realized I could make people happy for a living!” In turn, that continues to inspire me to give back to FCS and FCCLA.



The power of FCCLA to provide real leadership experience is demonstrated throughout James’ career and began in high school during his time as a state FCCLA officer. He will be at ACTE’s CareerTech VISION to address the Family and Consumer Sciences Education Division at their opening session. Stop by on Thursday, Dec. 5, to hear more of James’ story and meet him!



## ALEXANDRA LOZANO

**Cluster:** Arts, Audio/Video Technology  
**Place of Employment:** Nordstrom, Chicago

**Job Title and Responsibilities:** As a tailor/fitter, I am responsible for all things bridal and womenswear: from customer service, professional sewing, fitting and timely completion of garments, to collaborating with customers to create the dream dress, pattern making, knowledge of designer clothes and garment finishes, and creating custom veils, boleros, and other wedding accessories.

**For my introduction to secondary FCS, I give credit to:** Thomas Middle School, Arlington Heights, Illinois; Buffalo Grove High School, Buffalo Grove, Illinois.

In high school I had a teacher, Mrs. Dec. She had her own fashion business and was very talented. She made dresses for important Chicago women such as Walter Payton's wife, Connie. She helped me design and make my prom dress. She really believed in me and would encourage me to enter local fashion design competitions, and I even took some fashion courses at the local community college during my senior year. She gave me the confidence to pursue a fashion major in college. She was so inspirational and monumental in my life. She was a strong, successful woman. I really looked up to her.

**Postsecondary Education:** Associate of Applied Science in Fashion Design, William Rainey Harper College, Palatine, Illinois; Bachelor of Fine Arts/Minor Fashion Business, Columbia College Chicago, Chicago, Illinois

### How do you define success?

Success, to me, is doing what you love every day.

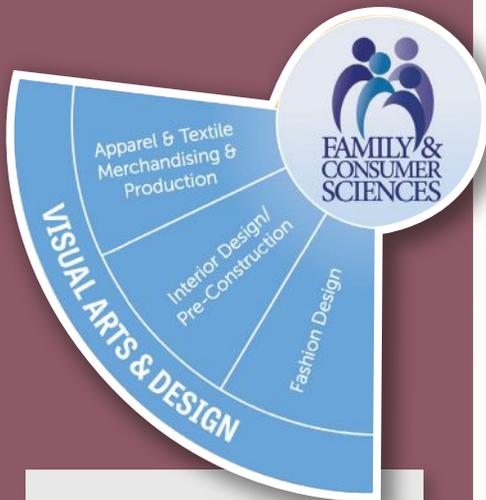
### What foundational skills did you acquire in FCS coursework that helped you achieve success?

I knew how to sew from a young age, but

“ FCS taught me all the proper rules of sewing, how to follow and manipulate patterns, and how to create something from your imagination. ”

### What impact did your FCS classes have on your postsecondary education and/or career?

FCS classes inspired me to pursue a degree in fashion. After college, I interned for a local bridal designer and learned the business. I went on to work at a number of specialty womenswear and bridal boutiques as a tailor. FCS gave me the fundamental skills to work in this industry.



As I was being fitted for my wedding dress, I was impressed with the professionalism and skills demonstrated by Alex Lozano. She added sleeves where there were none, added a hem that could be bustled, and took the décolletage from “oh, my!” to “oh, lovely.”

While marking and pinning, I quizzed her as to her preparation to complete this artistry. When I asked if she had FCS classes, she looked up at me and exclaimed, “Yes!” My feeling of confidence about making a significant change to the dress was affirmed, as I literally waited until we were at the wedding destination to look at the final product. Perfect.





## MAXWELL GOLDEN

**Cluster:** Education and Training  
**For my introduction to secondary FCS, I give credit to:** Creston Middle School and Warren Central High School in Indianapolis, Indiana.

Lynsi Neyland became my FCS teacher halfway through my early child education classes. After working with her, I decided my career path would be FCS education.  
**Postsecondary Education:** Dual enrollment in high school through Ivy Tech, Indianapolis, Indiana; currently enrolled as an undergraduate student in family & consumer sciences education at Purdue University, West Lafayette, Indiana

### How do you define success?

Success is subjective to every person and can depend on the context of the situation. I think success is best defined as the feeling you have when you accomplish something difficult or that you thought was impossible.

### What foundational skills are you acquiring in FCS coursework that will lead to success?

I like to think of FCS classes as the opportunity to learn a bunch of different sets of life skills that every adult needs. Early childhood education teaches me how to be a parent and how families work. Nutrition teaches me how to meet my dietary needs, keep my body healthy, and relates to the cooking classes. Financial literacy and professionalism are both important topics about which every adult should be well versed. I could go on and on through each topic of FCS and the life skill it provides. By learning these skills, I hope to be able to practice what I learn in my personal life and use it to make my path to success.

### What impact did your FCS classes have on your postsecondary education thus far?

Prior to exploring FCS classes I really wanted to do performing arts professionally. However, it wasn't until I began my dual credit class of early childhood education that I found my calling.

Working with the young students and learning about child development inspired me in a way I had not experienced before. I participated in the class for two years. By the second year I found that while I was very fond of younger kids, they aren't the age group I want to teach primarily. Mentoring the newer students in the class and assisting them to work with younger children: I found this to be the perfect balance for me!

“ I was able to discuss advanced concepts with the high school students while experiencing the joy and privilege of working with preschool students. This crossover made me think, ‘What if there is a connection that can be made between high school and preschool students?’ ”

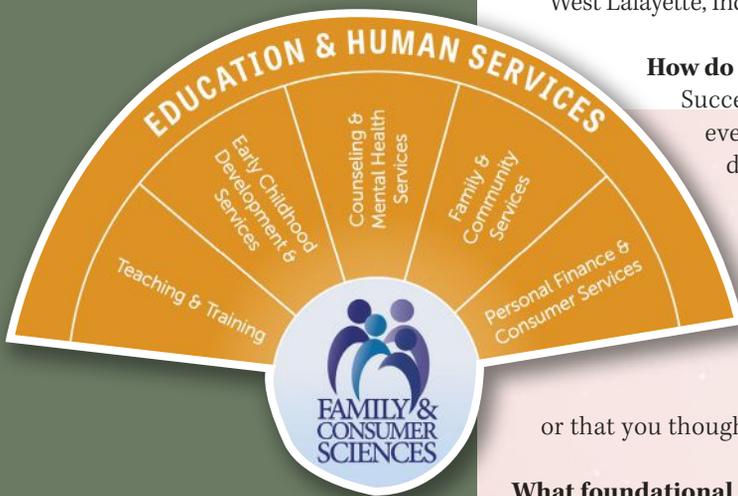
If all high school students worked with young children, is there a different or greater lesson that could be learned beyond the classroom? Would high school students become more mature? Would teen pregnancy rates be affected? How might the preschool environment change? Would the high school students be effective role models for the young preschool students? These were some of the many questions that came to me after my second year in the class, thus leading to my decision to major in FCS education.

### Have you used skills learned in FCS in any unexpected ways?

I use a lot of the concepts I have learned so far to work with preschoolers. By bringing down the difficulty level and by providing instructional assistance I found that much of the FCS content could be taught to preschoolers — nutrition, self-care and even interior design!

### Any additional story you'd like to share that might be relevant?

This summer, I had the opportunity to study abroad in Honduras with Purdue University. I really enjoyed introducing the students I worked with in Honduras to FCS concepts. Most of the students were pretty interested in the topics (preparing for college/careers and child development); from my perspective, it seemed like they enjoyed learning about the topics, as they were different from the subject matter of their core classes, applicable in a unique way.



I am privileged to have Max as one of my FCS education students at Purdue. While observing a classroom in his home secondary school, the principal asked about Max and then stated, “You send him back here when he is finished! We want him back in our FCS department!” A perfect example of the “grow your own” teacher recruitment philosophy.



Consider these stories of individuals whose FCS pathways can be found within three different career clusters; each credits a secondary FCS teacher and FCCLA advisor for fanning the flames of careers that inspire, challenge and provide personal satisfaction. Family and consumer sciences classes, as part of an FCS-related career pathway or foundational to other pathways, are crucial to postsecondary success as they strive to equip students with the knowledge and skills to succeed in their careers and in life.

The Strengthening Career and Technical Education for the 21st Century Act (Perkins V), in sections 134 and 135, acknowledges the importance and flexibility of FCS courses/pathways in career and

technical education. Synthesizing the knowledge and skills for many careers, developing competencies for “adulting,” and promoting opportunities to apply and enhance leadership skills: These are the stories of FCS. ■

**Carol R. Werhan, Ph.D.**, is a clinical associate professor in the College of Education at Purdue University. She manages the FCS education undergraduate program as well as the Transition to Teaching alternative licensure program for FCS. Werhan is the current ACTE vice president for the FCS Education Division, an active member of the American Association for Family & Consumer Sciences, and co-chair for the Alliance for FCS. Email her at [cwerhan@purdue.edu](mailto:cwerhan@purdue.edu).

## EXPLORE MORE

Check out the FCCLA's *Teen Times* (in the December/January issue) for even more individual stories of success through FCS.

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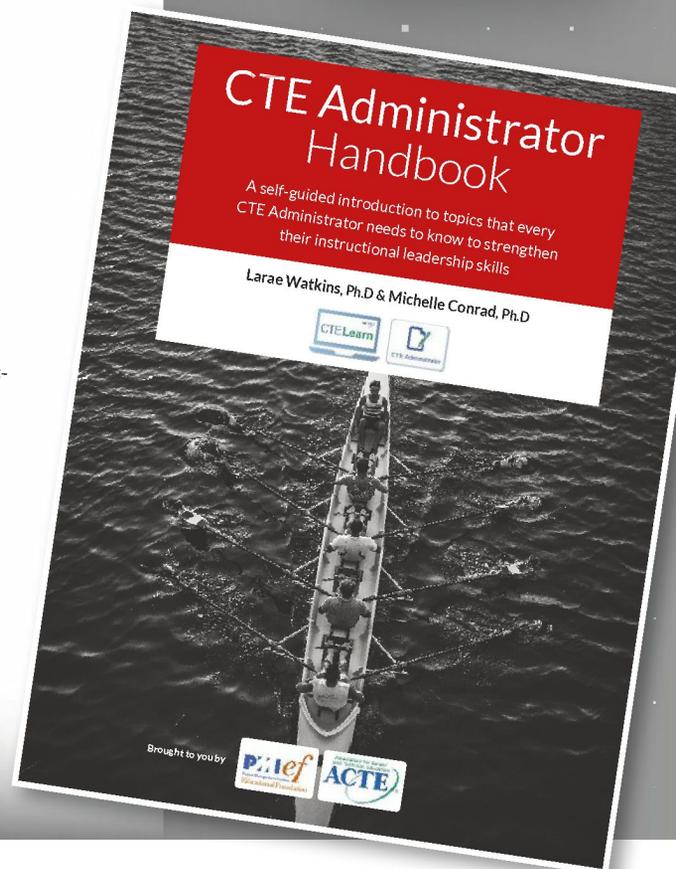
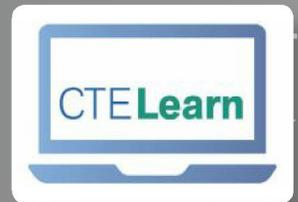
## Testimonials:

*"ACTE's CTE Administrator is a must-use for every leader pursuing high-quality in their programs. The objectives are clear and practical and I love the videos of the CTE directors discussing these topics. Each module is hosted by a current administrator who frames the topics so that administrators would have an overview of the concepts in order to understand it from the teachers perspective, but the hosts were also able to bring it back to the administrators role in those areas".*

*Paula Boughton – CTE Supervisor,  
Monroe-2-Orleans BOCES, Spencerport, NY*

*"This new course definitely points out that as CTE Administrators, we wear many different hats. The Handbook is great with plenty of resources and tools that help me to understand and enhance what I can be doing to help my teachers".*

*Patrick Biggerstaff – CTE Director,  
Area 31 Career Center, Indianapolis, IN*



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# Beyond Industry Partnerships:

## How Postsecondary CTE Programs Are Achieving Success

By Timm Boettcher

**ASK CODY WAITS, DIRECTOR OF THE OFFICE OF SKILLS DEVELOPMENT FOR THE ARKANSAS DEPARTMENT**

of Commerce, how important it is for a successful postsecondary career and technical education (CTE) program to be responsive to workforce needs, and he won't hesitate to answer: It is vital.

"It's vital to the success of not only the program, but also to those who participate in the program," said Waits. "If postsecondary CTE programs are not responsive to workforce needs, they are preparing

program participants for skills or jobs that are not available. If they get it right, they create a pipeline of talent for companies to source talent and can create corporate confidence that economic developers can leverage in competitive situations."

Strong partnerships between education and industry are key to getting it right. In the almost two decades that I have been working with representatives of education, industry and workforce development programs, I've seen firsthand the great

things that can happen when administrators, teachers and businesses collaborate. Education–industry collaboration helps postsecondary programs tailor curriculum to match industry requirements; it helps businesses connect with future employees through tours, speaking engagements, job shadowing and work experience opportunities; and most importantly, it helps ensure that students learn the skills needed for employment in high-wage, high-skill and high-demand jobs.

However,

“successful postsecondary CTE programs must do more than solidify strong partnerships with industry — they must be willing to refresh those partnerships, to morph and change over time to accomplish what industry needs today, in five years and beyond.”

Successful postsecondary CTE programs must be living, breathing entities that constantly reinvent themselves.

### Postsecondary CTE Success in Action

To ensure his Pinellas Technical College (PTC) – Clearwater Campus students are prepared for what lies ahead, campus director Jakub Prokop created a community engagement program. Prokop says the program is helping to foster a deeper level of collaboration between the Florida college and its business and industry partners.

“In today’s changing student demographic, we found that there are extra steps we can take to prepare the next-generation workforce,” said Prokop. “This new approach to community engagement will provide multiple levels of benefits for all stakeholders while bringing current industry standards into the classrooms and labs of PTC.”

Beginning this year, students considering PTC will start seeing logos and information about the community engagement program’s business partners — businesses they might someday work for — on the college’s website and in recruitment materials. Current students will hear about those business partners through email and other college communications. In return, those business partners will participate in an annual event during which they will interview recent or soon-to-be graduates.

The program will not only provide the curriculum and equipment feedback PTC has regularly gotten from its business

partners, but will incentivize prospective students and motivate current ones.

“Postsecondary education can be difficult because students often have a life they’re managing as well — kids and spouses, etc. Our population, generally, they’re weak in the ability to set things aside and focus solely on their education,” said Prokop. “With this program, we’re building internal motivation and persistence in our students, while keeping our business partners at the forefront of their minds.”

Also going above and beyond to keep its business partners at the top of its students’ minds is Chippewa Valley Technical College (CVTC) in Eau Claire, Wisconsin. Laurie Boettcher works with a lengthy list of local businesses each semester to ensure her students have the chance for real-world, hands-on learning opportunities.

“The content in our programs is constantly changing, and keeping up with making the curriculum relevant is an



ongoing process,” said Boettcher, who is program director and instructor for executive assistant, digital marketing, marketing and professional communications at CVTC’s Eau Claire campus. “As instructors, it’s incredibly important that we remain on the pulse of our industry.”

Like many others, every CVTC program uses an advisory committee to help ensure that curriculum, projects and experiences are relevant. The industry professionals on each committee outline the needs and demands of the employees they wish to hire, and CVTC aligns curriculum, projects and experiences to those needs. In addition, Boettcher is constantly nurturing relationships with local and regional partners to ensure her students have regular opportunities to apply what they are learning to the real world and, in turn, develop key skills.

For instance, each semester Boettcher collaborates with local companies to offer her Advertising students the chance to create a complete branding package for an area business. Her Marketing Research course participants work with three to six area businesses each semester to complete and present marketing research in regard to the businesses’ target audiences and specific needs. Students in her Social Media Policies and Ethics course work with six to 18 clients each semester to author tailored social media ownership contracts and policies for their specific businesses. Digital Audio and Video students work with local nonprofits to create videos for training or events. According to Boettcher, the fresh perspectives her business partners present ensure that her students are continually learning relevant, valuable skills.

“Learning in a classroom is one thing, but holding professional standards with

clients extends that classroom learning,” said Boettcher. “If we stop communicating with our local employers about their needs, we will be unable to develop relevant curriculum.”

Communicating with local employers is a priority for the University of Arkansas – Fort Smith (UAFS), which, in addition to serving 7,000 traditional students every semester, operates a Center for Business and Professional Development (CBPD) that specializes in customized training for local and regional businesses. About 100 companies utilize the center every year to upskill their employees in areas in which the university already specializes, like manufacturing, information technology and business.

“We’re constantly on the lookout for opportunities to engage with companies and find ways to address challenges we’re having,” said Ken Warden, dean of the College of Applied Science and Technology at UAFS. “This mechanism not only supports our programs, but helps us build a more robust relationship with our industry partners.”

When Fort Smith-based manufacturing company HSM was recently struggling to staff its manufacturing cells, for example, UAFS coordinated robotics training for more than 20 employees. Similarly, the Gerber facility of Nestlé Nutrition worked with UAFS to provide robotics training to its employees when the facility incorporated automation into its manufacturing. During each training experience, UAFS faculty were able to see firsthand what the companies were doing every day, and they used that knowledge to hone their own curriculum.

“There wasn’t an intuitive leap to apply what we were teaching in robotic cells, for instance,” said Warden. “But now we can see how our standard welding programming can fit into an auto-

mated welding environment. That really helped us shore up the gap between what we’re teaching and what’s happening in the real world.”

According to Warden, the key to a successful training program like CBPD is “meeting the companies where they are.”

“When we create these opportunities to engage with industry outside of our standard academic programming, it increases the relevancy of both parties,” said Warden. “Any notion of an ivory tower of education is removed, and they understand we’re here to help them meet their goals.”

### A Recipe for Postsecondary CTE Success

To be successful, postsecondary CTE programs must be willing to refresh the partnerships they’ve cultivated with business and industry; they must be willing to morph and change over time to accomplish what industry needs today, tomorrow and in the future.

“CTE programs have to be in a constant feedback loop with business and industry to address workforce needs,” said Sarah Heath, state director for career and technical education in Colorado and assistant provost for CTE and CTE dean within the Colorado Community College System. “Learners expect their program to prepare them for what lies ahead of them upon completion. In a constantly evolving economy, postsecondary CTE programs have to be nimble enough to address these shifts.”

Such flexibility can only be the result of a two-way partnership between education and industry.

“As a best practice, we have to meet with our business advisory partners at least twice a year,” said Rob Aguis, director of Fred K. Marchman Technical College in New Port Richey, Florida. “But

it can’t just be a meeting around the table where they hear what we can and cannot do; we have to be willing to take their advice, to work hand-in-hand to provide them with the workforce they need not just for today, but for tomorrow.”

How does one measure the success of a postsecondary CTE program? According to Wayde Sick, director and executive officer of the North Dakota Department of Career and Technical Education, one must look beyond graduation rates to the job placement rates of its students.

“Graduation rates cannot be the only measure of success for a postsecondary program,” said Sick. “Job placement needs to be just as important, if not more. The only way job placement occurs consistently is if the programs provide what employers and the labor market needs.”

Jeff Sullivan, dean of manufacturing, engineering information technology and apprenticeship at Chippewa Valley Technical College, agrees — and what’s more, he’s seen a measured improvement in enrollment as a result.

“If we don’t provide the best opportunities for our students, job placement options will be reduced,” said Sullivan. “We’ve found providing relevant curriculum that is contextualized to the field of study has been a best practice in retention. We’ve seen improvement in some courses by 15–20% based on contextualization of content in the subject area.” ■

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**Timm Boettcher** is president and CEO of Realityworks Inc. Boettcher is passionate about helping foster strong collaboration between education and business to help educators prepare youth with the skills needed to succeed in the workforce. Email him at [tim.boettcher@realityworks.com](mailto:tim.boettcher@realityworks.com).



# Northwest Intermountain Metal Manufacturers Experience CTE Success

By Jeffrey Ober

**THE NORTHWEST INTERMOUNTAIN MANUFACTURERS ASSOCIATION (NIMA), WITH DATA FROM THE** Idaho Department of Labor (2013), noted a shortage of qualified employees in the local market and, subsequently, the University of Idaho completed a study to determine the vital needs of those employees. Researchers Dixon and Stricklin

(2014) identified a gap in the education and skills training offered to students at the high school as well as the technical school in the area.

To meet this need, a collaborative effort was launched. Lewis-Clark State College — in coordination with the Clearwater Economic Development Association (CEDA)

and the University of Idaho — received a grant from the National Science Foundation (NSF) to create a career and technical education (CTE) program that helps students learn about opportunities in the local area and prepares them for those careers.

The result was the Northwest Intermountain Metal Manufacturing Career

Development Program (NIMM), intended to provide training to high school students in the areas of mechanical CADD and electro-mechanical technician jobs. NIMM was unique not only in its approach to program elements but also in its method of regional partnership development.

“ The geography of the north-central Idaho region puts the population centers along a shared border with Washington, where much economic activity occurs in both states simply due to location.

The NSF grant was designed to involve high school students from different districts across two adjoining states. In all, NIMM stakeholders include 22 school districts from two states, a university, a technical school, the state career and technical education department, ”

online learning divisions, the Idaho Department of Labor, and an economic development association.

### Background

The original goal of the program was to provide training to high school students in skills identified as in high demand by the local manufacturing industry. The hope was twofold: that upon graduation students would have the skills to start employment in the industry, or that they would have a head start on obtaining a college degree in those high-demand career fields. NIMM was designed to reach those goals in three ways:

1. Didactic education in specific areas including mechanical design and 3D modeling
2. A summer academy program with applied, hands-on education in electronics and machining
3. Industry involvement including tours, internships, job shadowing and employment

Each part of this program was developed in collaboration with all entities involved. The industry partners had input on the curriculum and skills being taught. The department of labor coordinated job openings and internships. The economic development association worked with tours and recruitment for the program. The university team helped coordinate and direct communication with the students, parents and schools. The technical school coordinated the overall project and hosted the summer academy programs. This created a unique team — it took some time to self-organize into a successful unit, but in the end we were very successful.

### Program Processes

Students from all across north central Idaho and southeast Washington were recruited in the fall while attending their sophomore year at high school. Then, over the following semester, learners participated in an online blueprint

reading class from the Idaho State Digital Learning Academy. They also visited manufacturing job sites. Held in conjunction with students' high school classes, this introductory experience helped students determine if NIMM, and a career in metal manufacturing, was for them — or not.

After that spring semester, students attended their first summer academy in person at the technical college. This summer academy was three weeks long and students stayed in the dorms on the campus during the week. Each day the students engaged in hands-on training in either electronics or machining (half in each program). Afternoon activities included

touring local manufacturing facilities, team-building, and working with coaches on mindfulness skills.

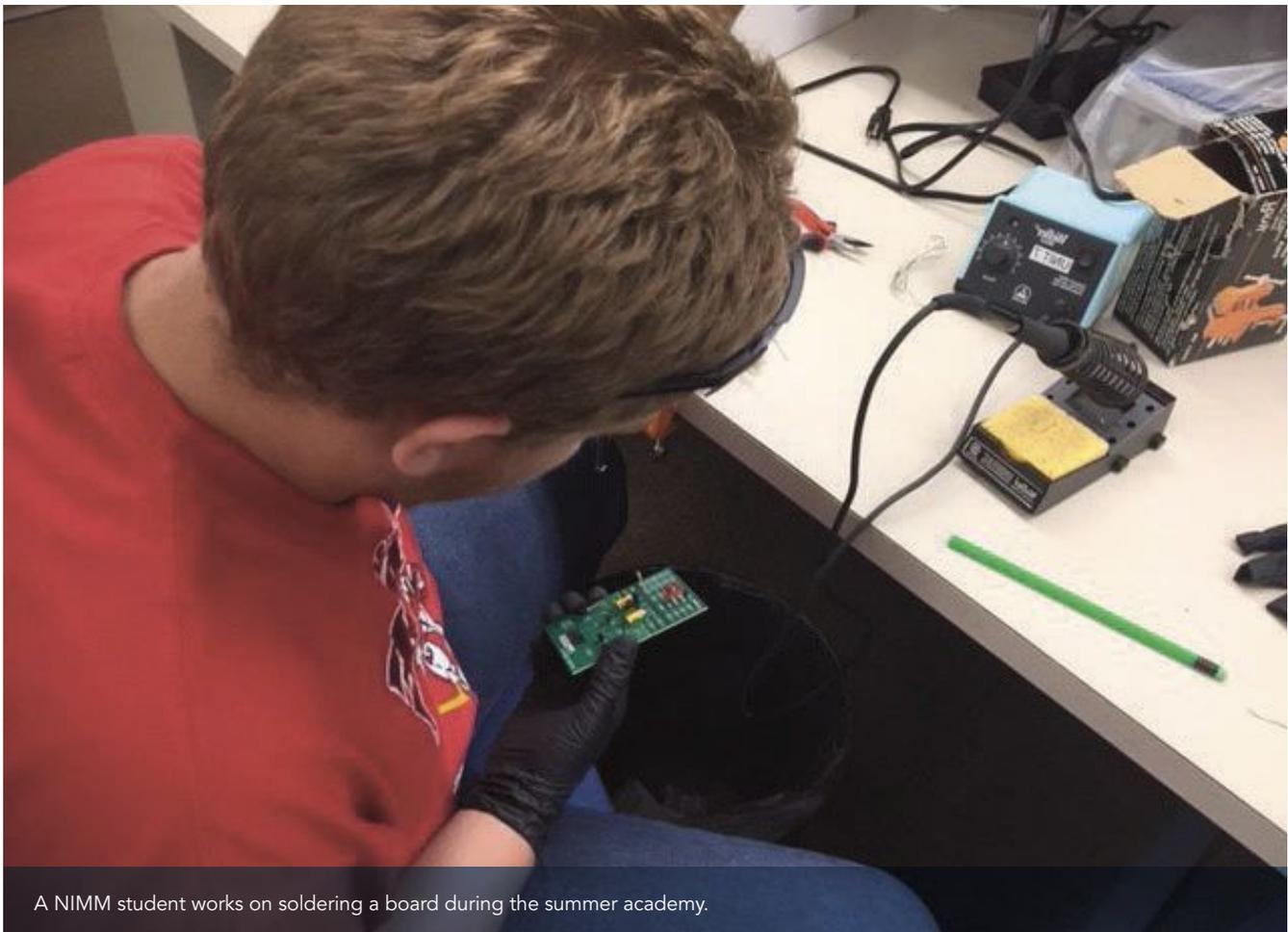
In the fall semester students again engaged in online classes, this time conducted via the technical college's online learning system. While enrolled in their respective high schools for their junior year, students took a class titled Introduction to CADD, followed by basic 3D modeling in the spring.

And again it was time for the summer academy! Learners' second academy experience would be similar to the first one, only those who had studied electronics before switched to machining

and vice versa. Nearly all the students from the first academy returned. In addition, returning students benefitted from different activities scheduled, more recreation, and new manufacturing facilities to visit.

Following the second summer academy, all students who desired more experience and employment were offered opportunities to become employed as interns or on a part-time basis; others participated in job shadowing and other experiences to witness metal manufacturing careers up close.

Senior year students then returned to enroll in an advanced 3D modeling



A NIMM student works on soldering a board during the summer academy.

course and finished the program in the spring semester with a class on career development skills. After graduation it is expected that students who complete NIMM will possess the basic skills and training required for immediate employment in various manufacturing jobs in the region. Students have an additional option to continue their education at the technical college to work toward an associate of applied science.

## Successes

### Student success

When the program started there were 90 students enrolled (the maximum number allotted). Three additional students held spots on the waiting list and, at various times during the year, individual students dropped out of the program for different reasons. Before beginning the Northwest Intermountain Metal Manufacturing Career Development Program, all of the students believed that they wanted a career in manufacturing; but by exposing them, in great detail, to the activities and the sites involved in manufacturing, some learned that this was not a career for them. Significantly, these students learned this while still in high school, before they started a job or formal education, potentially saving them a great deal of time, money and effort later in life.

Those students who did stay with the program learned useful skills that are needed in the local job market, increasing their likelihood of finding employment in the industry; many do, even before they graduate from high school. Other students go on to learn more in pursuit of a degree from the technical college, but nevertheless all students are now more focused on their goals and direction in their careers because of the direct exposure to the industry.

### Education successes

The educational institutions involved found new ways to collaborate and work together. NIMM worked across state lines and found ways to help students reach educational goals with systems in one state while the student actually lived in a different state. The project was able to help direct and fund the development of a number of online classes that are now available to students across the state of Idaho, to prepare those students with skills needed by the manufacturing industry. The technical college also found ways to coordinate with the high schools to provide education in specific fields and to help highlight opportunities in the region for employment and for further education.

### Business successes

The businesses in the region found success in learning new ways to work with the education system and the economic development organizations to find more skilled employees in the local area. Instead of simply waiting for employees with the skills they need, they were able to shape an education program that started with students in the tenth grade, to provide them with the exact training needed for employment. Throughout the program these employers were also able to interact with the students and potential employees to learn more about them and their own needs.

### Future Models

Lewis-Clark State College hopes to use this design as a way to model success in our region. Employers and businesses can set goals and identify the skills they need, and career and technical education systems will respond: designing programs and processes that will help students see, understand, and meet those needs. A

strong start in high school will give students a firsthand look at the career before they make a clear commitment; with an opportunity to sample the required skills, or even to work in those jobs on a limited basis before they graduate from high school, they will be equipped to continue their education with a better understanding of their own future. As an added benefit, an opportunity like this can incentivize students to live, learn, work and play all without having to leave their own region.

The largest challenge in continuing a program like this, like many others, is the funding. This process was started with a substantial grant from the National Science Foundation that supported all the processes involved with the program. As we continue to move forward, we look for other ways to help continue this process and these ideas with the current funding streams that we have available to us. This will require more cooperation and even sharing of resources between secondary, postsecondary, industry and economic development associations in new and different ways. ■

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**Jeffrey Ober, Ed.D.**, is the dean of career and technical education at Lewis-Clark State College in Lewiston, Idaho. He has over 18 years of experience in education and over a decade of experience in information technology and project management. Email him at [jrober@lcsc.edu](mailto:jrober@lcsc.edu).

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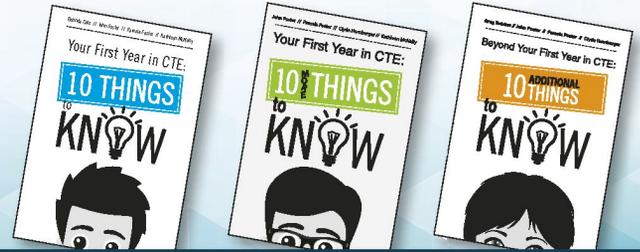
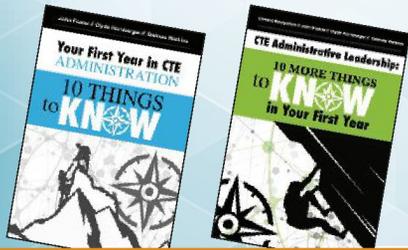
*“We’re sending  
students to college  
or into the workforce  
with a leg-up.”*

Laura Henning, Media Specialist,  
Trumbull Career and Technical Center



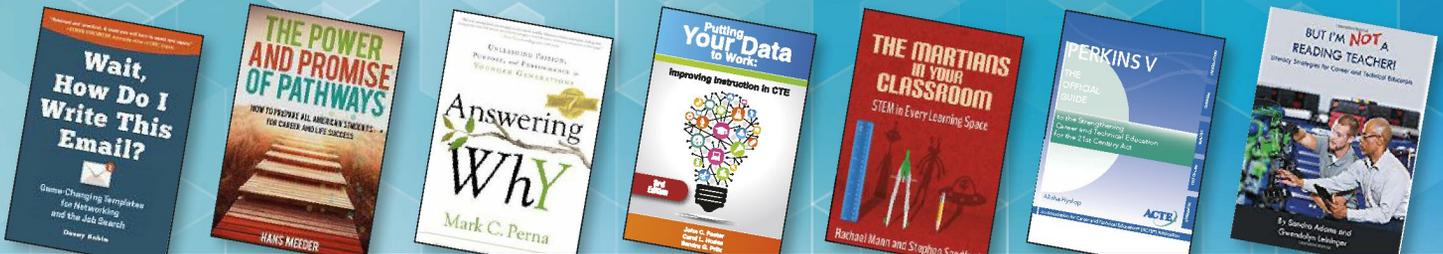
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## Start Planning Your VISION Experience

This year's CareerTech VISION is fast approaching. It's happening **Dec. 4–7** in sunny Anaheim, California. To maximize your VISION experience, ACTE is once again offering a VISION mobile app to give you:

- Up-to-date session schedules, room assignments and real-time updates on last-minute changes
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- Access to event and city maps to enhance your time in Anaheim
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Watch for additional mobile app information coming soon. And if you have not yet registered for VISION, be sure to do so by **Oct. 25** to secure the advance discounted rate — visit [www.careertechvision.com](http://www.careertechvision.com).



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## CTSO Students Make a Difference in the World

Many students involved in career and technical student organizations (CTSOs) make a difference in their communities through service learning projects. But these projects don't have to be limited to the local community. By adding an international focus, students are not only more engaged in their projects, but also learn important skills for the global workplace and gain an advantage when they are competing with students across the country — or the world — in CTSO competitions. ACTE has partnered with the Asia Society to create a new, free, online module available in the CTE Learn platform, "Developing Global Workforce Readiness Skills Through CTSOs and Service Learning," to help you integrate global perspectives into your CTSO activities, including service learning. Find out more at [www.ctelearn.org/cte-lessons](http://www.ctelearn.org/cte-lessons).

## ACTE Board of Directors Election Verify your membership by Nov. 6 to vote!

The 2020 ACTE board of directors election will be held this year from

**Dec. 6–Jan. 6!** Please mark your calendars to reflect the updated election schedule:

- In order to vote, you must be an ACTE member by **Nov. 6**
- Voting will open during CareerTech VISION on Friday, Dec. 6 and end at 11:59 pm EST on **Jan. 6**.
- Winners will be announced the week of **Jan. 7**.

For more information about the election, including information on the positions and candidates, please visit [www.acteonline.org/board\\_election](http://www.acteonline.org/board_election).

## State Leadership Training

Are you looking to further develop your leadership skills in your role as a state association leader? Join us at VISION on **Dec. 4** from 8:00 a.m.–5:00 p.m. All current state leaders and those interested in service are welcome to attend. Registration cost is \$25; register on your VISION registration form. Get the details at [www.acteonline.org/professional-development/leadership-development/state-leadershiptraining-program/](http://www.acteonline.org/professional-development/leadership-development/state-leadershiptraining-program/)

## New STEM Professional Development Modules and Tools

The Center for Global Education at Asia Society has partnered with ACTE and Advance CTE to create online professional development modules that support educators to teach career readiness skills using global content and active, project-based learning. These 10 new online, 15-minute modules

will help educators understand how to make global connections to local STEM issues; create high-quality global STEM projects; assess global workforce readiness skills; connect with classrooms abroad to complete collaborative projects; and teach students to be project managers so they are more successful in completing their projects. The modules, together with sample curriculum and other tools and resources, are available completely free of charge thanks to generous support from PMIEF. To get started, please visit CTE Learn ([CTELearn.org](http://CTELearn.org)), create a free login, and click on Career Readiness in a Global Economy: STEM and CTE in the Free Lessons section. For more information, view [AsiaSociety.org/CTE](http://AsiaSociety.org/CTE) or contact Heather Singmaster at [hsingmaster@asiasociety.org](mailto:hsingmaster@asiasociety.org).

## Apply today for the Postsecondary Leadership Success Program – sponsored by ECMC Foundation!

The PLSP-ECMC Foundation is a yearlong professional development experience intended to develop the organizational leadership and management skills of postsecondary CTE professionals, with an emphasis on addressing the needs of underserved populations. Twenty (20) selected fellows will:

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- Be eligible to earn two graduate education credit hours from a Tier 1 University
- Earn a \$4,000 stipend

Applications are due Dec. 15. Please visit [www.acteonline.org/plsp-ecmcf](http://www.acteonline.org/plsp-ecmcf) for more information.

## Proposed Bylaws Amendments 2019

### Article VII—

### Election of Board of Directors B. Process of Nomination

2. The ACTE Nominating Committee shall present to the Assembly of Delegates at least two candidates for the office of president-elect. Additional nominations may be made from the floor, providing each nominee has been interviewed and deemed compliant with applicable criteria in the Board Policy Manual by the Nominating Committee and is approved by a majority of the delegates voting. If there are not two candidates for office, the office shall be declared vacant by the Board of Directors.

#### **Rationale:**

*ACTE has established criteria for office in the Board Policy Manual. Someone must determine if the candidate running from the floor meets the criteria. The nominating committee is the logical group to determine if the candidate meets the criteria.*

*ACTE legal counsel pointed out that the Bylaws were misdrafted in regard to the running from the floor provision. Under the current framework, anyone who has been interviewed, regardless of whether the nominating committee deems them fit for the position, may run from the floor and potentially be elected to office. It is recommended that the Bylaws be updated to clarify*

# SKILLS TO SUCCEED ACADEMY



**FREE**

to CTE educators; \$1,000 incentive program for institutions

**ACTE has partnered with Accenture, one of America's leading employers, to share their successful online Skills to Succeed Academy with CTE classrooms.**

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**3 courses / 36 modules, 15-30 minutes each**

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- Getting a Job (20 modules)
- Success in Work (10 modules)

**The first 24 schools/CTE programs to have 500 students complete at least 1 course in the Skills to Succeed Academy will receive \$1,000, which can be used for staffing, student incentives, equipment or any other support you see fit!**

[acteonline.org/s2s](http://acteonline.org/s2s)

that an individual running from the floor must be deemed compliant with applicable criteria in the Board Policy Manual by the nominating committee to avoid the possibility of unqualified candidates being elected.

**Pro:**  
Only candidates who meet the criteria and are interviewed will be able to run from the floor. This change addresses a loophole that allowed anyone who simply applied the option of running from the floor, regardless of whether or not they met the criteria. Running from the floor is still allowed.

**Con:**  
None.

**Article IV—  
Organizational Structure  
A. Affiliated State Associations**

Affiliated state associations are organizations which are organized for the purpose of providing

leadership and services to promote, improve, and maintain the quality of career and technical education in that state. Affiliated state associations are those applying for and approved by the Board of Directors for this status. In addition, one association organized for individuals employed by federal and national offices shall be recognized as a state association and shall conform to the requirements of and have the rights and privileges accorded to state associations in these Bylaws. Affiliated state associations shall meet the following criteria: 1. Effective January 1, 1999, each state may have a single affiliated association. Any state, the District of Columbia, commonwealth, territory, insular area, or nation shall be considered eligible for affiliation with ACTE as state associations. 2. The organizational structure of each affiliated state association

shall embrace all those interested in career and technical education who are from that state. 3. The bylaws, policies and activities of an affiliated state association shall not be in conflict with the ACTE Bylaws and must meet the requirements of ACTE operating policies. 4. Each affiliated state association shall provide its members an opportunity to affiliate with any division category in the ACTE structure.

**Rationale:**  
ACTE legal counsel pointed out that the Bylaws were misdrafted and placed ACTE in a vulnerable position. An Affiliated State Association should be in alignment with ACTE on paper and in practice.

**Pro:**  
Removes potential liability for ACTE.

**Con:**  
None. ■

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# CLINICAL RESEARCH COORDINATOR

By Susan Reese



## CLINICAL RESEARCH COORDINATORS WORK WITH PRINCIPAL INVESTIGATORS OF CLINICAL TRIALS AND

research studies on collecting, coding, evaluating and interpreting data collected as part of a clinical study, as well as the preparation and management of budgets. They may initially assist with determining the viability of a study, and during the study they supervise staff activities. They may also be responsible for informing patients and/or caregivers about the study and its expected outcomes. As they assist the principal investigator with administrative tasks, clinical research coordinators are also tasked with monitoring the activities to ensure proper protocols, ethical guidelines and best practices are followed.

### The Workplace

Clinical research coordinators may work for pharmaceutical companies, hospitals and other health care facilities, medical

## SCHOOL SPOTLIGHT

# PIMA COMMUNITY COLLEGE

### PIMA COMMUNITY COLLEGE (PCC) WILL BE STARTING THE CELEBRATION OF ITS 50TH ANNIVERSARY

this fall, because although it was approved as a community college via a voter referendum in 1966, its first classes actually met in 1969. Those classes met in locations that reflect the direct connections between career and technical education and the industries and organizations that would benefit from that education, such as the Tucson Medical Center. In 1970, classes were held in a hangar at the Tucson International Airport. Today PCC has six campuses and currently enrolls more than 70,000 students annually, as it continues its mission of “providing affordable, comprehensive educational opportunities that support student success and meet

the diverse needs of its students and community” (PCC, n.d.).

PCC offers a number of degree and certificate programs in areas that include business, computer information technology, health, public safety, science and engineering, and the trade professions. As part of its Health-related Professions department, PCC offers an associate of applied science for aspiring clinical research coordinators. In this degree program, in classes taught by experienced clinical research professionals, students learn to manage clinical research trials involving human subjects. The program’s goals include meeting or exceeding the standards established by the Association of Clinical Research Professionals and

the Society of Clinical Research Associates, and to prepare students to pass the Association of Clinical Research Professionals certification exam.

The PCC clinical research coordinator degree program has general education requirements in math, English, and arts and humanities, as well as courses in business and professional communications and career planning. In the first semester students take courses that include Introduction to Human Anatomy and Physiology, Foundations of Clinical Research, and Elementary Data Analysis with Spreadsheets. The second semester includes courses in Biomedical Ethics and in Human Sexuality, and in semester three, students study Clinical Research Common Terminology, Clinical Research Regulatory Compliance, Product Development and Regulatory Affairs, and Introduction to Clinical Research Study Protocol.

The fourth semester of the program consists of Pharmacology for Clinical Trials, Clinical Research Coordination and

and diagnostic laboratories, and colleges and universities.

## Education

Clinical research coordinators have some form of postsecondary education, usually a bachelor's degree, although they may find an entry-level position in the field with an associate degree. Clinical Research Associated (2019) recommends a course of study related to science or health, as well as courses that will increase organizational and computer skills. Certifications are also helpful, and these are available through the Association of Clinical Research Professionals and the Society of Clinical Research Associates.

## Earnings

According to CareerExplorer (2018), the average annual salary for a clinical re-

search coordinator in the U.S. is \$78,447. The U.S. Department of Labor's Bureau of Labor Statistics *Occupational Outlook Handbook* (US DOL BLS) (2019) reports that the median annual wage for medical and clinical laboratory technologists was \$52,330 in May 2018, with the highest 10% earning more than \$80,330.

## EXPLORE MORE

For more information about the career of clinical research coordinator and the education and training it requires, here are some resources to explore.

American Association of Bioanalysts  
<https://www.aab.org>

American Medical Technologists  
<https://www.americanmedtech.org>

American Society for Clinical Laboratory Science  
<https://www.ascls.org>

## Job Outlook

The *Occupational Outlook Handbook* projects that employment of medical and clinical laboratory technologists will grow 12% from 2016 to 2026. CareerExplorer (2019) estimates the U.S. will need more than 11,000 clinical research coordinators over the next 10 years.

American Society for Clinical Pathology  
<https://www.ascp.org>

American Society of Cytopathology  
[www.cytopathology.org](http://www.cytopathology.org)

Association of Clinical Research Professionals  
[www.acrpnnet.org](http://www.acrpnnet.org)

Clinical Research Associated  
[www.clinicalresearchassociated.com](http://www.clinicalresearchassociated.com)

National Accrediting Agency for Clinical Laboratory Sciences  
<https://www.nacls.org>

Society of Clinical Research Associates  
<https://www.socra.org>

Management, Lab Skills and Professional Practice, and Research Management for Sponsors and CROs. Finally, there is a Clinical Research Coordinator Internship, in which students participate in a supervised work experience in a clinical research setting. As the student rotates through a variety of research sites, the emphasis is on professional and management skills, team communication and interaction, and the application of research principles, protocols, procedures and regulations.

PCC notes that the clinical research coordinator degree prepares graduates to seek entry-level positions or career advancement in settings such as hospitals, medical centers, universities or private research groups, but it may also apply toward a bachelor's degree, because PCC has transfer agreements with a number of universities, including Arizona State University, Northern Arizona University, the University of Arizona and Arizona Christian University.

Clinical research is an exciting, dynamic field that helps determine whether new

drugs or medical devices will help patients achieve good outcomes. Clinical research coordinators are valuable team members who work closely with medical researchers and with patients in clinical trials, so programs such as PCC's will continue to be necessary in ensuring the future safety and health of our nation's population.

For more information about Pima Community College and its Clinical Research Coordinator program, visit [www.pima.edu](http://www.pima.edu).

**Susan Reese** is a contributing writer for *Techniques*. Email her at [susan@printmanagementinc.com](mailto:susan@printmanagementinc.com).

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# DRIVING THE FUTURE: SWITCH VEHICLES PREPARES STUDENTS TO CHANGE THE WORLD

By Nichole Kezsely

## WHEN RON BILBERRY TOLD HIS HIGH SCHOOL STUDENTS THEY WERE GOING TO

build an electric car and drive it around campus, the reaction from his students was mostly disbelief. “Then we rolled in the frame and brought in boxes full of parts, batteries, motor and wiring,” said Bilberry, a conceptual physics teacher at Archbishop Hanna School in Sonoma, California. “It was intimidating to them at first, but they were propelled by the idea that they could drive the car they created.”

“As a learning tool, it’s awesome,” said Bilberry, adding that many aspects of the project, from electricity to batteries to the concept of torque, tie into his curriculum. Bilberry has been using The SWITCH Lab as a class project with students every year since 2016.

## A Vehicle for Education

In 2011, Peter Oliver and Jim McGreen founded Switch Vehicles Inc., to design a simple, fun and accessible electric vehicle concept. This evolved into a do-it-yourself electric vehicle toolkit that nearly anyone could assemble, and became the foundation for The SWITCH Lab — an innovative school program empowering

“It’s the most powerful thing I’ve been a part of. My students have big goals now, because they see what they can do.”

Patricia Murphy,  
Robotics Science Teacher,  
Healdsburg Junior High School

teachers and students to build a full-size, street-legal electric vehicle as a class project.

“At the time, I was also teaching a course on electric vehicle technology at Santa Rosa Junior College,” said Oliver. “Ultimately, I wanted to teach students more than technical skills. I wanted to inspire the next generation of leaders and makers.”

The SWITCH Lab is designed as an all-inclusive system including the Switch electric vehicle kit, a comprehensive curriculum and teacher training workshops. The vehicle is designed to be built and then disassembled, so it can be reused year after year.

“It really is plug and play,” said Roger Pressley of Central Academy of Technology and Arts in Monroe, North Carolina. “Any school can do this, regardless of the tools or shop facility. You can start with any space.”

The SWITCH Lab curriculum meets and exceeds standards for career and technical education (CTE) and ties into core academic subjects ranging from engineering and physics to robotics and auto shop. “When Peter designed the program, he put a lot of thought into what schools would need,” said Megan Byrd, operations manager at Switch Vehicles. “The program is very adaptable and is being used by high schools, junior colleges and even middle schools. It can be taught in as little as one week, or over the course of a full school semester.”

## The Instructor Workshop

Oliver recognized that electric vehicle technology could be intimidating to many teachers, so he created a four-day workshop for instructors to experience the same hands-on learning and assembly process they will bring to their students.

The workshop allows them to gain skills and confidence, and see that these vehicles are not nearly as complicated as they can appear to be. “Teachers really appreciate how the workshop breaks the complex technology into clear step-by-step modules,” said Oliver.

## The Student Experience

The course is invigorating for students too — providing a hands-on, real-world learning experience that goes beyond the technical challenge of building an electric vehicle. Students are learning essential employability skills most sought after by modern employers: leadership, teamwork, project management, communication, organizational skills and cooperation.

Science teacher Patricia Murphy has been using the The SWITCH Lab to teach her school’s new robotics class. Murphy said she can tell students about future careers in the tech and robotics world, but when they can build a real car and learn to master the different parts of the process, that’s something they can translate to their world and their life.

“In all my years of teaching, it’s the most powerful thing I’ve been a part of. My students have big goals now, because they see what they can do.”





The SWITCH — An Electric Vehicle for Education



Healdsburg Junior High School, California



Analy High School, Sebastopol, California

## Making the Switch

Electric and hybrid vehicles are quickly becoming more prevalent. According to a report by J.P. Morgan (2018), “automakers are preparing to phase out cars powered solely by internal combustion engines (ICEs) as governments look to tackle fuel emissions. The growth in electric vehicles (EVs) and hybrid electric vehicles (HEVs) is climbing rapidly and by 2025, EVs and HEVs will account for an estimated 30% of all vehicle sales.”

In the U.S., California is leading the charge with sustainable fuel sources. California is responsible for roughly 50% of all electric vehicle sales in the U.S., and electric vehicle sales accounted for more than 6% of all new car sales in 2018 (EVAoption, 2019).

For young people exploring career possibilities, the electric vehicle industry is rife with opportunities. This creates an imperative for the educational community — ensuring that students are prepared to take advantage of this growing field.

## Partners in Funding

To help bridge the gap between educational demand and funding, Switch Vehicles has collaborated with industry, government and foundation partners to encourage school grants. In 2015, Sonoma Clean Power donated \$150,000 to kick off The Switch Lab program with four Sonoma County schools, working with the local CTE foundation to implement the project.

“We recognized that this really fits with what we’re trying to bring into schools,”

said Kathy Goodacre, executive director of the Career Technical Education Foundation Sonoma County. “The hands-on aspect. The connection to industry. And we really want to ensure that not only are students exposed to the industry, but to potential careers.”

In 2018, the California Energy Commission awarded a \$1 million grant to the Cerritos Community College District’s Advanced Transportation Technology and Energy Center, which has funded The SWITCH Lab in 12 California high schools — focusing on schools serving underserved communities, minority groups and regions impacted by poor air quality.

“California is transitioning to low-carbon fuels and zero- and near zero-emission transportation to meet its ambitious climate change goals and federal air quality standards,” said Janea A. Scott, the lead commissioner on transportation. “Ensuring a well-trained workforce to develop, deploy, and shepherd this transition is critical.”

“We recognized that this really fits with what we’re trying to bring into schools. The hands-on aspect. The connection to industry. And we really want to ensure that not only are students exposed to the industry, but to potential careers.”

Kathy Goodacre, executive director, Sonoma County CTE Foundation

## The Switch Mission

Oliver says that Switch Vehicles is a small company with a big mission. “We believe in the creativity and potential of our young people to create a positive future for the world, and our focus with The SWITCH Lab is to help them prepare.” Oliver added that The SWITCH Lab will be deployed in 120 schools by the end of this year, and that number is expected to double in 2020. ■

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Instructor Workshop, Niles West High School, Chicago, Illinois

# EVENTS CALENDAR

ACTE's CareerTech

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2019

Dec. 4-7  
Anaheim, California  
[careertechvision.com](http://careertechvision.com)



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Region IV  
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Leadership Conference

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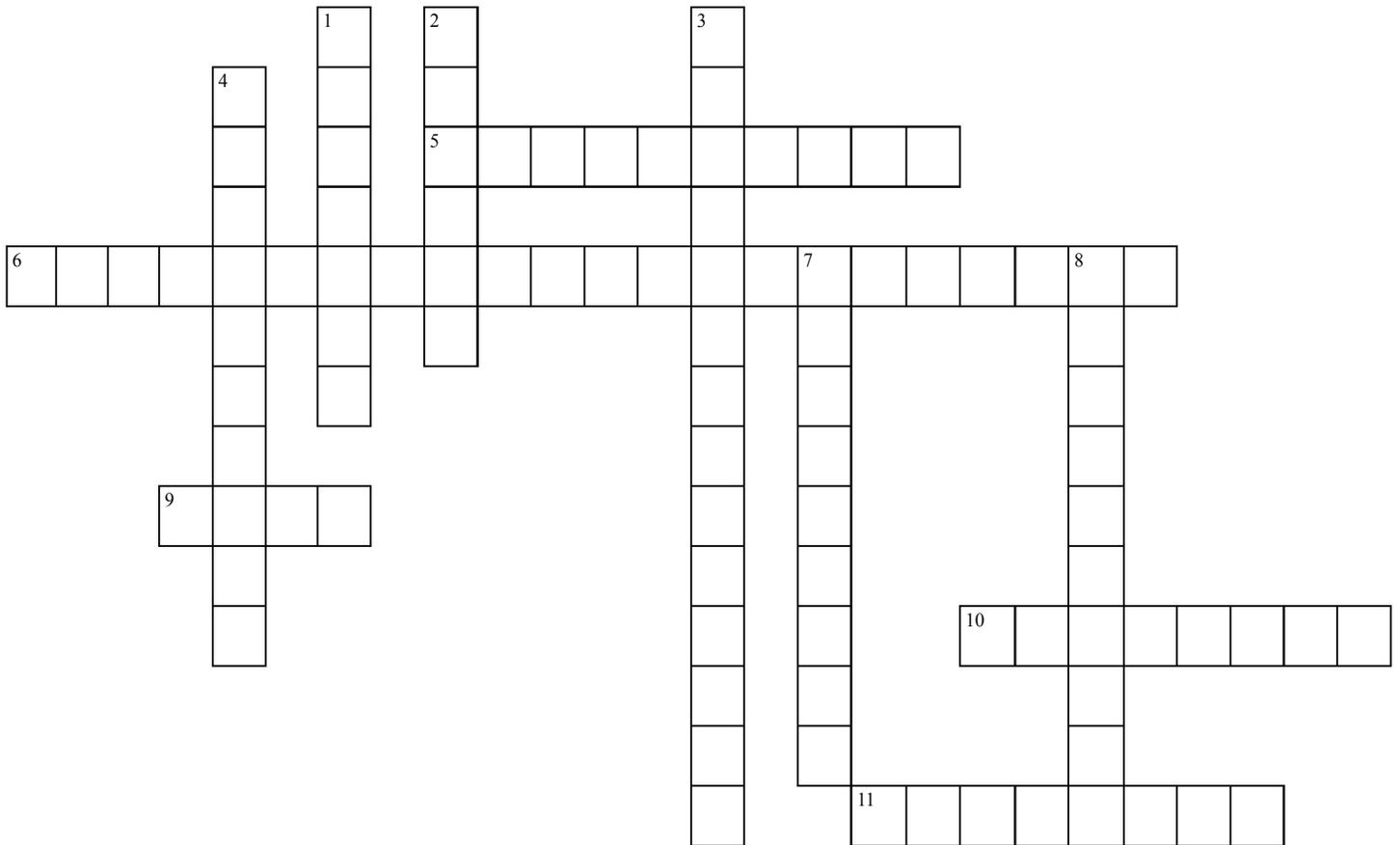
**APRIL 22-25**  
LAKE TAHOE, NEVADA  
[acteonline.org/region-v-event](http://acteonline.org/region-v-event)

Region I  
**ACTE**

Leadership Conference

**TBD**  
CHECK THE WEBSITE FOR  
UP-TO-DATE INFORMATION  
[acteonline.org/region-i-event](http://acteonline.org/region-i-event)

# Postsecondary Success



## Across

5. Postsecondary [BLANK] Success Program at ACTE – Sponsored by ECMC Foundation
6. Describes many learners who face extreme barriers to entry and who often find success in CTE, like Torrie
9. Acronym for the Northwest Intermountain Metal Manufacturing Career Development Program, designed to assist north central Idaho and southeast Washington high school students in gaining skill development
10. “A simple, fun and accessible [BLANK] vehicle concept that became the foundation for The Switch Lab — an innovative school program empowering teachers and students.”
11. “Strong partnerships between education and [BLANK] are key to getting it right,” wrote Timm Boettcher for this issue

## Down

1. “I found [BLANK] because of FCS.”
2. Last name of Maxwell, Purdue University student studying family and consumer sciences education
3. Employability skills component category identified by SkillsUSA to “include the individual’s attitudes and approaches to how one shows up, acts toward others, and gets work done.”
4. Last name of Torrie, PLSP-ECMC Foundation fellow, pathways coordinator and a writer who provided two valuable contributions on Postsecondary Success for this issue
7. Percent of jobs that will require training after high school by 2020, according to the Georgetown University Center on Education and the Workforce
8. City expected to host ACTE’s Region IV Leadership Conference in 2020

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**MIT mechanical engineering student**

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ACTE's CareerTech

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## Companion Events



- ▶ NCCER's Construction Career Pathways Conference



- ▶ The CTE Research and Professional Development Conference



- ▶ The National Association of Agricultural Educators Convention



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VISION and CareerTech Expo	Advance (by 10/25)	Regular (after 10/25)
ACTE Member	\$445	\$525
Non-member	\$645	\$695
<b>ACTE Excellence Awards Gala</b>	\$80	\$80
<b>Special Combo Rate: CareerTech VISION, Expo and Awards Gala (save \$10)</b>		
ACTE Member	\$515	\$595
Non-member	\$715	\$765



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\*CLMA 20/20 Foresight Report July, 2019

