## Who Responded?

**207** Total number of respondents

**38** Number of states represented

**60% of respondents**
CTE teachers with > seven years in the field

**25% of respondents**
Administrators (department chairs, coordinators)

**67% of respondents**
Teachers (secondary, postsecondary and adult education)

**8% of respondents** Other

## What Did We Ask CTE Educators?

**33** Number of questions

Topic areas covered:

- Professional learning preferences
- Engagement and obstacles
- Overall priorities
- Demographics
- Education
- Industry-specific licensing
- Employment information

**23 out of possible 59**
Number of professional learning priorities to select

**5** Categories of professional learning:

- Planning and organization
- Instructional skills and strategies
- Technical skills and strategies
- Technology integration
- Assessment and evaluation of student learning

For more detailed information on the survey questions and categories, please see the brief, *What CTE Instructors Really Want for Professional Learning.*

# PROFESSIONAL LEARNING: WHAT CTE TEACHERS WANT

By Catherine Green and Cherise G. Moore

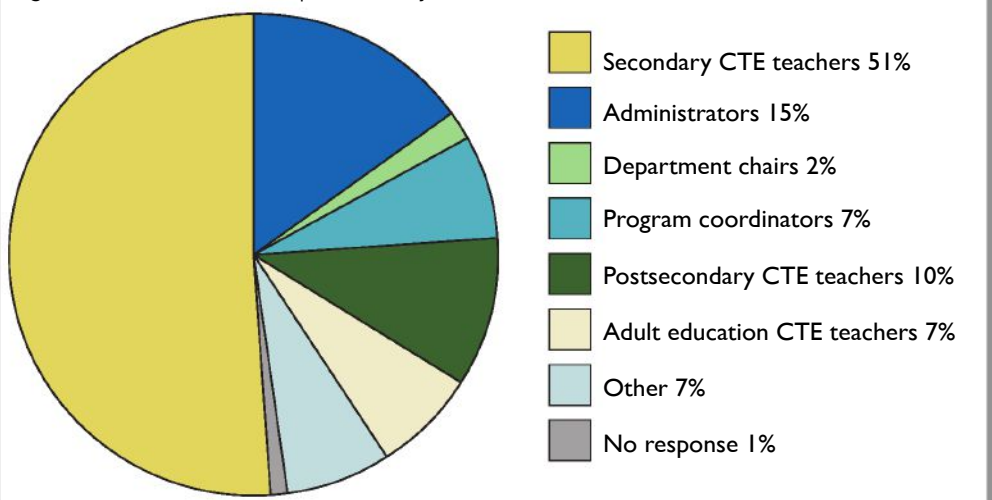## AN IMPORTANT COMPONENT OF MEETING STUDENTS' LEARNING

needs involves meeting the professional learning needs of career and technical education (CTE) teachers and improving their effectiveness. But what do CTE teachers really want to learn and what areas would they like to improve in? American Institutes for Research began studying this question in 2014 and conducted a national survey in 2015 of administrators and teachers (Figure 1) to better understand their priorities (Table 1).

Not surprisingly, the survey showed that the top five combined priorities of CTE teachers and administrators for professional learning are:

- designing authentic or simulated learning experiences requiring real-world use of industry-specific technologies
- aligning curriculum, instruction, assessment and evaluation
- improving business/industry engagement
- motivating students
- incorporating critical thinking and problem-solving skills

This article briefly analyzes these priorities and concludes with recommendations to guide CTE educators in planning their future professional learning.



Figure 1. Distribution of Respondents by Role

Secondary CTE teachers 51%
Administrators 15%
Department chairs 2%
Program coordinators 7%
Postsecondary CTE teachers 10%
Adult education CTE teachers 7%
Other 7%
No response 1%

## Top Five Priorities Identified by CTE Administrators and Teachers

Table 1 identifies the top five out of 59 overall priorities for administrators, teachers and both groups combined. The top priority for *both* administrators and teachers—designing authentic or simulated learning experiences—underscores the importance of classroom instructors' staying abreast of emerging technologies that are relevant to specific industries. Without teachers' continued professional learning in this area, it is easy for their students to be poorly prepared for their careers when they transition to the workforce.

The second priority—aligning curriculum, instruction, assessment and evaluation—emphasizes the essential role that planning and organization play in the fast-changing world of CTE. Beginning with the end in mind (assessment and evaluation), educators need to know how to ensure that their teaching and materials are aligned with the tools their students' progress will be measured by.

The third priority for both groups combined was improving business/industry engagement. This indicates that CTE teachers recognize the value of partnering with individuals and organizations so that instruction is aligned with the real-world needs of business and industry.

When examined separately, teachers ranked motivating students as their third priority, improving business/industry engagement as their fourth priority, and implementing industry standards as their fifth priority. Administrators, on the oth-er hand, selected incorporating critical thinking and problem-solving skills as their third priority, improving business/industry engagement as their fourth, and developing and using multiple measures to assess learning as their fifth. This difference in priorities by role is likely due to the differences in perspectives: Teachers are naturally focused on students, whereas administrators may be more focused on connecting with employers.

## Focus for CTE Instructors' Professional Learning

The survey provided an opportunity to assess both high-level recommendations related to assessing, planning and carrying out professional development at the program or state level, as well as more targeted recommendations based on the actual needs identified by the survey participants. At a high level, the recommendations included in the related research brief, *What CTE Instructors Really Want for Professional Learning* (Green, Moore, & Clark [2015]), highlighted:

- Ways to use the survey findings to plan future professional learning for CTE instructors.
- Ways to validate the research outcomes at the state or program level.
- Ideas and guidance on continued reassessment of staff for their professional development needs.
- The need to recognize the differences and similarities in thoughts around critical professional learning needs of teachers and administrators.

When considering the specific focus for CTE instructors' professional learning, the findings provided an ideal opportunity to explore where these wants and needs aligned in more depth. As previously mentioned, there are three top priorities on which both teachers and administrators agree for the professional learning needs for CTE instructors: designing authentic or simulated learning experiences requiring real-world use of industry-specific technologies; aligning curriculum, instruction, assessment and evaluation; and improving business/industry engagement. So the question to consider is, how can we use this information to better meet the professional learning needs of CTE teachers?

## Recommendations for CTE Educators

It is critical to consider all possible opportunities for and types of professional learning that might best meet the needs of CTE teachers as they relate to the three top-ranking priorities. Professional learning encompasses many models and variations for implementation. The goal for teachers and professional learning is to improve teacher effectiveness and student achievement by applying what was gained through the professional learning opportunity. The following are three professional learning recommendations for CTE educators to consider.

Table 1. Top 5 Priorities Selected Overall and by Teachers and Administrators

| Priority | Category | Frequency Selected Overall (207 responses) | Frequency Selected by Administrators (51 responses) | Frequency Selected by Teachers (139 responses) |
|---|---|---|---|---|
| Designing authentic or simulated learning experiences requiring real-world use of industry-specific technologies | Technology Integration | 150 (72%)* | 35 (69%)* | 103 (74%)* |
| Aligning curriculum, instruction, assessment, and evaluation | Planning and Organization | 139 (67%)* | 37 (73%)* | 94 (86%)* |
| Improving business/industry engagement | Technical Skills and Strategies | 121 (58%)* | 25 (49%)* | 84 (60%)* |
| Motivating students | Instructional Skills and Strategies | 118 (57%)* | 22 (43%) | 88 (63%)* |
| Incorporating critical thinking and problem-solving skills | Instructional Skills and Strategies | 110 (53%)* | 27 (53%)* | 72 (52%) |
| Developing and using multiple measures to assess learning | Assessment and Evaluation of Student Learning | 98 (47%) | 24 (47%)* | 62 (45%) |
| Implementing industry standards | Planning and Organization | 108 (52%) | 22 (43%) | 80 (58%)* |

*Indicates Top 5 priorities for each group of respondents (overall, administrators, and teachers).

> " Professional learning provides a vital opportunity to update knowledge and skills as industry practices continue to change. "

First, offer professional learning related to real-world industry experience. Designing authentic or simulated learning experiences requiring real-world use of industry-specific technologies was the highest-ranked priority for both teachers (74 percent) and administrators (69 percent). This need may indicate that the existing real-world learning experiences are limited. One way to address this need is to engage business and industry partners to provide resources, tools, equipment, site visits, tours, teacher externships and guidance on what is currently happening in real time in these industries.

Business partners are critical in providing authentic learning experiences for teachers and students. This type of professional learning may be formal or informal, but as the survey showed, teachers need these real-world experiences to stay current in their field so that they can translate what they are learning into authentic industry experiences for their students. Such opportunities will ensure that students are prepared to compete successfully for the most in-demand careers in their industry.

Second, provide time for professional learning so that CTE teachers learn how to align curriculum, instruction, assessment and evaluation. At the most formal extreme, this may include creating a professional learning community focused on curriculum alignment, instruction, assessment and evaluation. Less formal ways to provide the time and training needed to help teachers improve in this area include creating site- or program-based professional partners, identifying teacher-mentors, and establishing study circles or communities of practice among like-minded teachers interested in this topic.

There may also be formal training on instruction and assessment, increasing rigor and relevance, standards alignment or other high-impact training areas re-

lated to the priority. The training could happen at the site/program level, within a region, and/or through an industry-based professional organization, as well as other avenues.

Third, invest in providing training on stakeholder and employer engagement. Improving business and industry engagement was the third most-selected professional learning need for CTE teachers and administrators overall. What exactly does that mean and what does professional learning related to this look like? The answer may take several forms:

- providing training related to stakeholder identification

- developing facilitation skills

- developing marketing skills

- creating elevator speeches

- community asset mapping

- understanding how to show potential partners what is in it for them

- building and retaining an advisory board

The professional learning needed to help teachers improve business and industry engagement includes many different areas, and because of the continuous need to work with business and industry partners, it should be job-embedded, ongoing professional learning.

## Conclusion

Professional learning provides a vital opportunity to update knowledge and skills as industry practices continue to change. To prepare students for the careers of tomorrow, their teachers must understand how to provide them with real-world learning experiences, how to deliver relevant and rigorous instruction focused on measurable outcomes, and how to leverage the expertise and skills of business

and industry partners. Strong professional learning leads to "effective teaching practices, supportive leadership and improved student results" (Learning Forward, 2011). That is ultimately what we all want. Knowing where to focus the professional learning should make doing this easier.

The Building Bridges project sums it up well: "Professional development serves as the bridge between where [we] are now and where [we] need to be to meet the new challenges of guiding all students in achieving higher standards of learning and development" (U.S. Department of Education, 1995). Tech

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## REFERENCES

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Learning Forward. (2011). *Standards for professional learning: Quick reference guide.* Oxford, OH: Author. Retrieved from **http://learningforward.org/standards-for-professional-learning#.VrzKf_krIdU**

U.S. Department of Education. (1995). *Building bridges: The mission and principles of professional development.* Washington, DC: Author.

## RESOURCES

American Institutes for Research (AIR)
**www.air.org**

Association for Career and Technical Education
**www.acteonline.org**

California Adult Literacy Professional Development Project (CALPRO) – A state leadership project administered by AIR on behalf of the California Department of Education
**http://www.calpro-online.org**

*Meeting the Professional Learning Needs of Career and Technical Education Teachers* by Marcela Movit, Ruth Sugar, Cherise Moore, Mariann Fedele-McLeod, Catherine Green, Joseph Jones, Ashley Miller and Anestine Hector-Mason
**http://www.air.org/resource/meeting-professional-learning-needs-career-and-technical-education-teachers**