Career/Technical Education: Teacher Preparation Project
A Fast-Track Model

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THE NEED

Almost 75 percent of new career/technical (CT) teachers arrive in classrooms with little or no training for how to plan instruction, teach, use assessments for student learning or manage classrooms.

At the beginning of their first year of teaching, alternatively certified career/technical education (CTE) teachers specifically need:

- a mentor in the same or related instruction area
- a support group of educators
- curriculum, resources and tips from instructors
- an orientation to CT student organizations
- more preparation time prior to the beginning of courses
- access to a variety of professional development opportunities

OVERVIEW

Highly effective CT teachers play a crucial role in making high school meaningful for students. Career/technical teachers should prepare students to complete challenging workplace assignments, and prepare them for further study at two- and four-year postsecondary institutions. For these teachers to be successful, they must advance training and help students understand the connection between their academic studies and work. Teachers must give assignments that require a blend of academic, technology and technical skills to complete.

To assist states, school districts and schools in ensuring that they have highly effective teachers in every CT classroom, the Southern Regional Education Board (SREB) and the National Research Center for Career and Technical Education (NRCCTE) developed a research-based professional development project to prepare teachers for the demands of getting all students ready for further learning and the 21st-century workplace. The professional development is based on four modules: classroom assessment, classroom management, instructional planning and instructional strategies.

INTENT

The induction model is designed to build the capacity of beginning CTE teachers and to offer instruction that is intellectually demanding, standards-focused, and is aimed at having CTE students ready for work and further study. The model also builds CTE teachers’ capacity to design instruction that is actively engaging using strategies such as project-based learning and cooperative learning.

The four modules include a series of lessons that can be sequenced into professional development sessions based on the immediate needs of beginning teachers in each of the four areas. The lessons can be taught: a) in a sequence of four modules; b) by focusing more in depth on a topic within a given module; and c) by selecting a series of critical topics across the four modules.

CTE teachers need to know how to motivate and engage students. They need to know how to teach technical skills and integrate the core content areas of literacy, math and science into their classroom instruction. Teachers need to know how to assist students in finding their niche both academically and professionally. Twenty-first century CTE teachers must be able to advance students’ readiness for college and careers and to teach those habits of behavior and mind that make for successful students and for success in the workplace and further study.

PROJECT COMPONENTS

Professional Development — 196 hours (before, during and after the first year of teaching)

- Ten days of intensive instruction during the summer prior to first year teaching
- Three two-day, follow-up sessions for each quarter of the school year that focus on the next nine weeks of instruction
- Ten days of structured reflection in the summer after the first year of teaching that focus on developing a yearlong instructional plan
- On-site coaching visits to provide focused feedback
- Mentoring from an experienced teacher to help address daily challenges
- Support from the principal or building administrator to provide encouragement and to offer positive, constructive feedback

EXPECTED OUTCOMES

When implemented with fidelity, the combination of high quality professional development and high quality site-based support by mentors, administrators and coaches result in CTE teachers having increased levels of competence, effectiveness and career commitment.
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<th>Module Title and Description</th>
<th>Module Outcomes — Areas of Teacher Competence</th>
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<td><strong>Module 1: Instructional Planning</strong>&lt;br&gt;Effective CTE instruction is carefully planned to target the academic and technical skills within a career pathway to prepare students for both further learning and the workplace.</td>
<td>Create short-term and long-term standards-based instructional plans based on the varying learning needs of students.  &lt;br&gt;Specific Areas of Emphasis:  &lt;br&gt;• Plan instruction that reflects the new mission of CTE, supporting both college- and career-readiness.  &lt;br&gt;• Set instructional goals that incorporate industry standards, 21st-century skills, all aspects of an industry, and high-level academics (reading, writing, mathematics, and science).  &lt;br&gt;• Make instructional modifications for diverse learning needs.  &lt;br&gt;• Plan collaboratively with colleagues, advisory committees, and postsecondary partners.  &lt;br&gt;Reflect both individually and collaboratively, on the effects of instruction and continually improve instructional practice.  &lt;br&gt;Specific Areas of Emphasis:  &lt;br&gt;• Reflect individually with guiding questions and the use of a professional portfolio.  &lt;br&gt;• Reflect collaboratively through the use of protocols for providing feedback and looking at student work.</td>
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<td><strong>Module 2: Instructional Strategies</strong>&lt;br&gt;Research-based instructional strategies to engage and motivate students and deepen learning</td>
<td>Use instructional strategies that actively engage students in developing problem-solving, critical thinking, and team-work skills.  &lt;br&gt;Specific Areas of Emphasis:  &lt;br&gt;• Use problem-based and project-based learning with real-world problems and tasks.  &lt;br&gt;• Design intellectually demanding assignments.  &lt;br&gt;• Use cooperative learning.  &lt;br&gt;• Embed academic skills into the completion of authentic assignments.</td>
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<td><strong>Module 3: Classroom Assessment</strong>&lt;br&gt;Assessment provides a clear picture of students’ performance in relation to the standards, informing teaching practice and further learning.</td>
<td>Use formal and informal assessment strategies to: evaluate student progress toward learning goals; provide feedback to improve student learning; and inform changes that improve instruction.  &lt;br&gt;Specific Areas of Emphasis:  &lt;br&gt;• Use formative and summative assessment methods that prepare students for workplace and postsecondary types of assessment (for example, employer and college-readiness exams).  &lt;br&gt;• Incorporate student self-assessment, especially through a portfolio of work.  &lt;br&gt;• Use rubrics to clearly define assessment criteria.  &lt;br&gt;• Create written exams that mirror standardized assessment or employer exam questions.  &lt;br&gt;• Assess student progress in using reading, writing, and mathematics to solve problems and take action in the field.  &lt;br&gt;• Develop a plan for grading and reporting student progress.</td>
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<td><strong>Module 4: Classroom Management</strong>&lt;br&gt;A well-managed classroom centers on respectful, collaborative relationships that support student learning.</td>
<td>Create a learning environment that encourages student motivation, positive behavior, and collaborative social interaction.  &lt;br&gt;Specific Areas of Emphasis:  &lt;br&gt;• Explain the goals and characteristics of effective classroom management.  &lt;br&gt;• Plan practical strategies for getting to know students and create positive student-teacher relationships.  &lt;br&gt;• Examine examples of rules and procedures to promote positive student behavior in classrooms and labs.  &lt;br&gt;• Develop effective intervention for occasions when students disrupt learning, and establish consequences that build student accountability.  &lt;br&gt;• Communicate with parents and engage them in supporting students’ success.  &lt;br&gt;• Design extra help to support students in reaching standards.  &lt;br&gt;• Integrate a CT student organization in the classroom to promote 21st-century skills.</td>
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### Summary of Assumptions and Findings

After three yearlong phases of field testing, findings emerged in relation to the assumptions to be tested about the conceptual framework. The findings are summarized in the table below.

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<th>Conceptual Framework</th>
<th>Assumptions Tested</th>
<th>Findings</th>
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<td>Relevant content based on the unique needs of CT teachers entering through an alternative route</td>
<td>• Five major areas of content include: instructional planning, instructional strategies, assessment, classroom management, and reflection on practice.</td>
<td>• The content of the modules is relevant and meets the needs of CTE teachers. Data from each round of field tests were used to revise the modules according to CTE teachers and instructors’ recommendations.</td>
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<td>A sequence of professional development sessions including a 10-day summer experience prior to the first year of teaching; quarterly two-day sessions throughout the first year; and a 10-day summer experience after the first year</td>
<td>• An intensive, rigorous summer experience best prepares the teachers for the demands of the first weeks of school. • Productive struggle is a necessary part of making the transition to teaching. • A continuous learning experience throughout the first year enhances reflection and on-the-job learning. • A summer experience after the first year enhances reflection that promotes a well-planned second year.</td>
<td>• The intensive summer experience put teachers through a “productive struggle” in which they needed support and coaching from the instructor, but as the year progressed, teachers expressed how valuable the initial intensive summer was to their success as a teacher. • Continuous learning experiences established a sense of community as a cohort and helped teachers learn how to reflect on their instruction, provide face-to-face feedback to others and continuously improve. • The second year of summer experience provided a culminating reflective experience, an opportunity to deepen understanding, and to apply what was learned to planning for the next school year.</td>
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<td>Quality instructional delivery</td>
<td>• High quality adult learning experiences include dialogue with peers, an opportunity to address the authentic problems of teaching, and reflection on learning. • Modeling, practice, and feedback will help teachers develop instructional skills.</td>
<td>• Teachers experienced the kinds of strategies that they were expected to use in their own classrooms. • Teach-backs were helpful in preparing teachers for the real classroom.</td>
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<td>The support of a trained, on-site mentor</td>
<td>• Mentors need to follow a structured schedule of regular contact with the new CT teacher that addresses the challenges of the transition to teaching.</td>
<td>• Teachers who had regular contact with their mentors experienced a greater sense of support and felt part of the school. These experiences led to teachers remaining in the teaching profession.</td>
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<td>The support of a trained administrator</td>
<td>• Administrators need to meet regularly with the beginning teacher as well as observe and provide feedback on instruction.</td>
<td>• Teachers who had regular contact with their administrators experienced a greater sense of support and felt a part of the school. These experiences led to teachers remaining in the teaching profession. Some teachers were elevated to leadership roles in their school improvement efforts.</td>
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<td>Coaching from the professional development instructor</td>
<td>• Regular visits from the professional development instructor include classroom observation and feedback, as well as making connections with mentors and administrators.</td>
<td>• Teachers valued the constructive feedback they received on coaching visits. • Instructors felt the visits allowed them to better plan the follow-up professional development experiences.</td>
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<td>A community of practice</td>
<td>• Ongoing interaction with colleagues, both face-to-face and electronically, builds a community of support and enhances reflective practice.</td>
<td>• Teachers felt a strong sense of community with the colleagues in their cohort based on the face-to-face professional development sessions throughout the year.</td>
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