Teacher Certification Models

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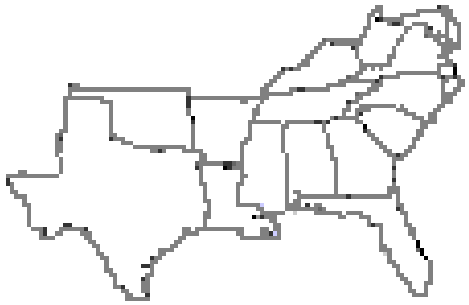
Alternative Licensure CTE Teacher Induction Model

"Increasing teacher quality is essential to improving the academic and technical achievement of CTE students."

Project Proposal, 2010

SREB



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Challenges of Non-Traditional CTE Teacher Preparation

Complexity of Nontraditional Entry into CTE Teaching

- Diversity of certification routes
- Increasing percentage of teachers entering through nontraditional routes
- Unique needs of beginning CTE teachers
- Teacher attrition
- Shortage of CTE teachers

Increased CTE Teacher Responsibility

- Challenges of the new mission—students college and career ready
- Student diversity
- Intellectual rigor
- Project- and problem-based learning
- Embedded academic content

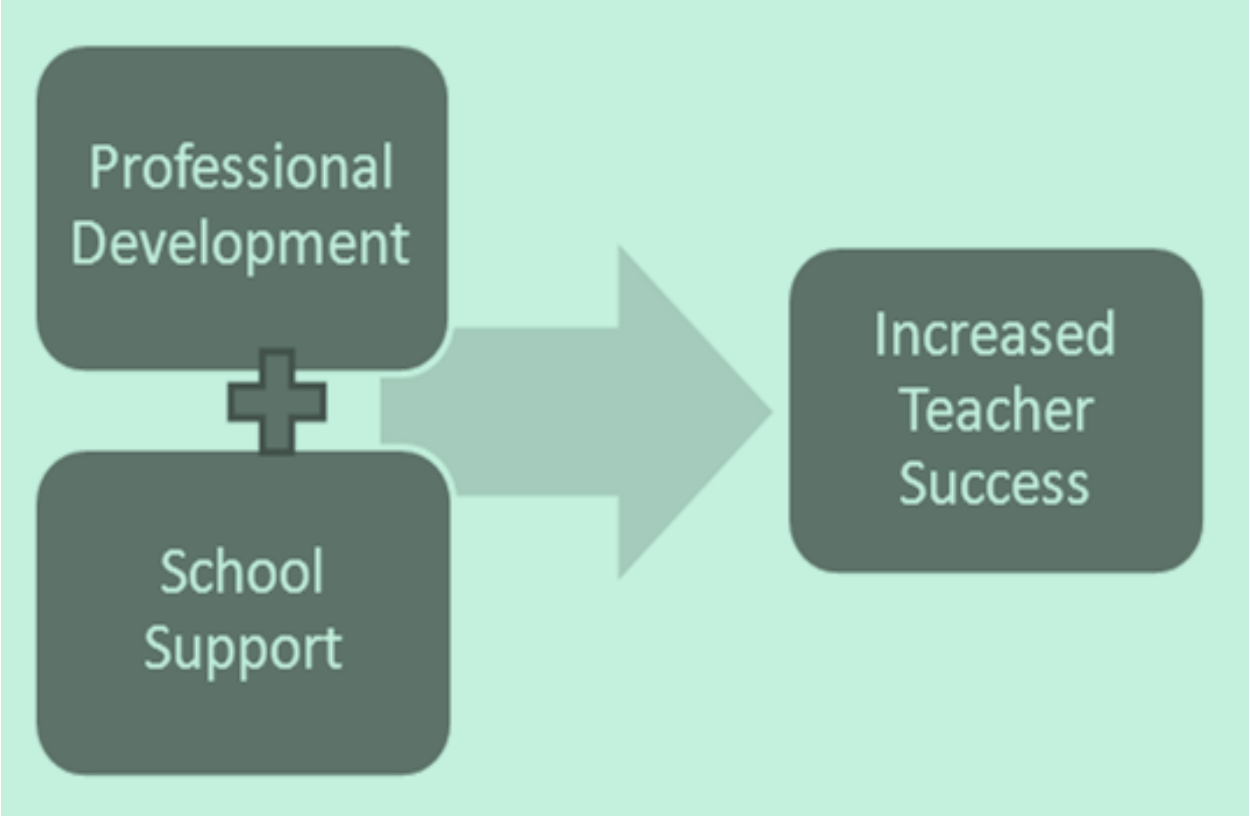
Induction for Early Career Teachers

"…so that CTE students are actively engaged in rich, academically rigorous activities in which they develop 21st century skills."

Project Proposal, 2010

- Comprehensive, fast-track induction model to build substantial teacher capacity earlier in the teacher's experience
- Evidence based, meets the requirements of Perkins IV, and answers the needs of the field
- Designed to impact competence, self-efficacy, and commitment to the field

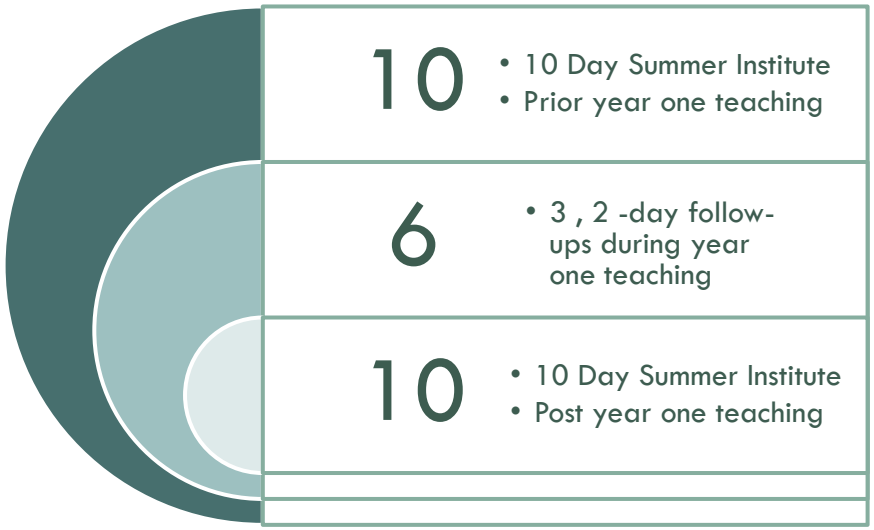
Conceptual Framework for the Model



High-quality teacher training and support lead to increased teacher competency, self-efficacy, career commitment, and ultimately, improved student outcomes.

Components of the Model

High Quality Professional Development



School Support

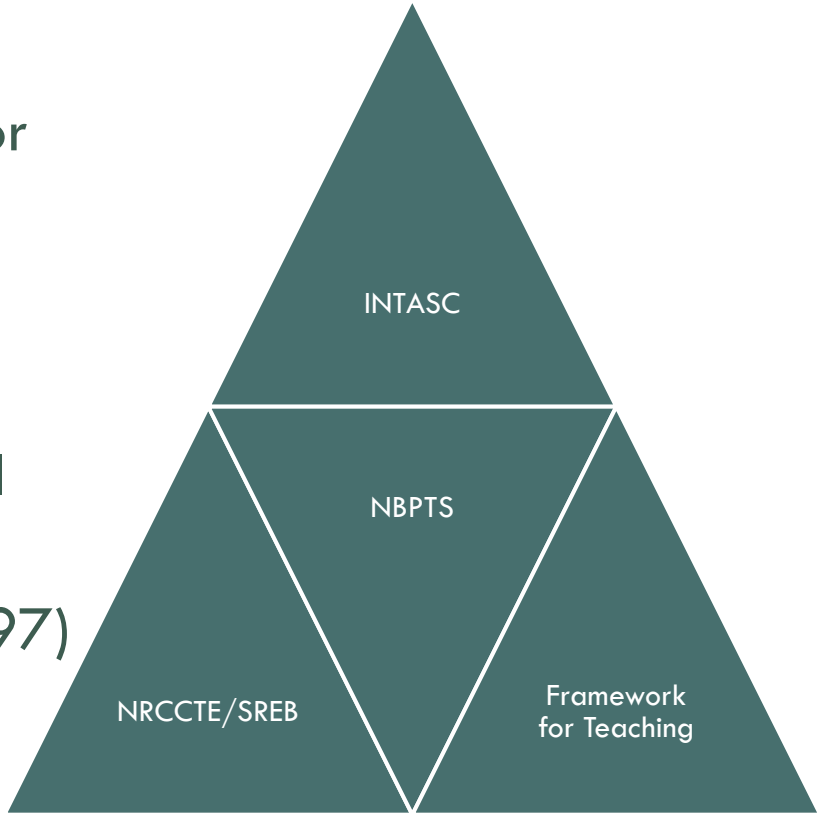
- On-site coaching visits from the professional development instructor
- Mentoring from a trained, experienced teacher
- Support from the building administrator
- Electronic communities of practice

High Quality Professional Development

- Content driven by the research and needs of the field
- Time for reflection
- Substantive interaction and dialogue with peers
- Opportunities to apply learning to authentic problems of practice
- Over an extended period of time with opportunities for:
  - Application
  - Reflection
  - Feedback on implementation

Research-Based Professional Development Content Alignment

- Interstate New Teacher Assessment and Support Consortium Model Standards for Beginning Teachers (1992)
- Framework for Teaching (Danielson, 1996)
- National Board for Professional Teaching Standards for Career/Technical Teachers (1997)
- SREB surveys of beginning teachers and NRCCTE studies



Professional Development Content

Instructional Planning:
Create short-term and long-term standards-based instructional plans based on the varying learning needs of students.

Research-Based Instructional Strategies:
Use instructional strategies that actively engage students in learning and encourage the development of problem-solving, critical thinking, and teamwork skills.

Teacher Competence

Classroom Assessment:
Use formal and informal assessment strategies to evaluate student progress toward learning goals and provide feedback to improve student learning.

Classroom Management:
Create a learning environment that encourages student motivation, positive behavior, and collaborative social interaction.

Teacher Reflection: Reflect, both individually and collaboratively, on the effects of instruction and use the reflective process to continually improve instructional practice.

Instructional Planning Module

- Content—technical, academic, and 21st century skills
- Focus on students and their needs
- Big six reading skills
- Numeracy—writing mathematics problems
- Curriculum map
- Course syllabus
- Unit plan with a project-based learning focus
- Lesson plan

Instructional Strategies Module

Project-Based Learning

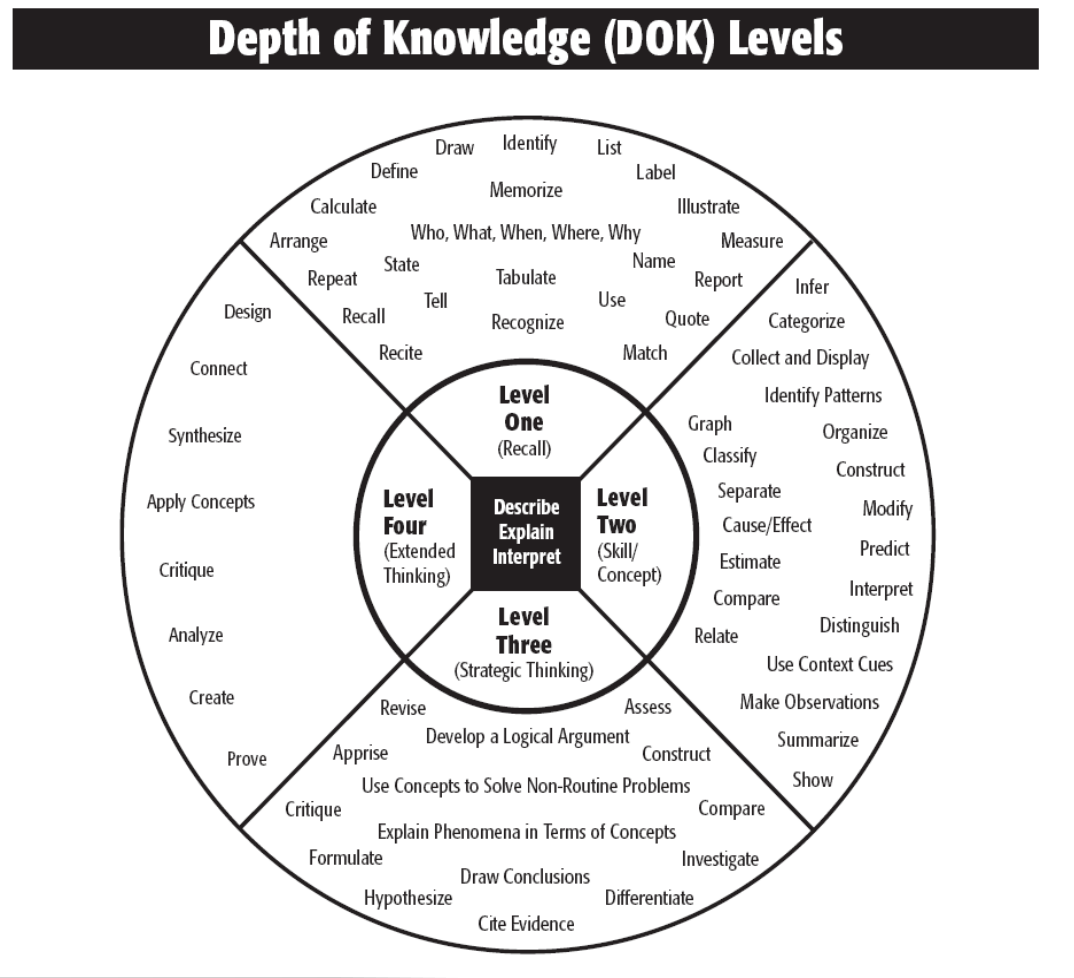
- Central to the curriculum
- Focused on real-world problems that lead students to the central knowledge and skills of an industry
- Involve students in intellectually challenging problem-solving and investigation
- Embed high-level mathematics and literacy
- Build self-direction and accountability

Cooperative Learning

- Imitates real-life learning and problem solving
- Combines teamwork with **individual** and group accountability
- Working with diverse groups

Intellectually Challenging Assignments

- Recall—
- Basic Application of Skill or Concept—Level Two
- Strategic Thinking—Level Three
- Extended Thinking—Level Four



Classroom Assessment Module

- Use of formative and summative assessment
- Rubrics to measure performance
- Written exams that model college- and career-readiness questions
- Embedded literacy and mathematics
- Portfolios to measure progress over time
- Balanced grading system—technical skills, academics, and 21st century skills

Classroom Management Module

Prevention—Personalization and Motivation

- Know students well
- Create a climate of respect
- Rituals and routines
- First weeks of school
- CTSO
- Involving parents

Intervention

- Rules and consequences
- One-on-one conferences
- Improvement contract
- Communication with parents

Findings—Professional Development

Content

- Clarification and organization of content
- Sequence and pace of content
- Emphasis on student needs, motivation, and classroom management
- Integration of academics
- CTE area-specific examples

Delivery

- Instructional delivery modeled throughout all modules
- Coaching during small group and individual planning times
- Opportunities to "teach-back" and reflect

High Quality School Support

- Local administrators and mentors trained in the professional development materials with custom-designed calendars of responsibilities
- Classroom visits from the professional development instructor
- Electronic networking through webinars and a website with the capacity for journaling, portfolios, and resources

Findings—Support Component

- Importance of sustained, structured support
- Specialized training and materials for administrators and mentors—speaking same language
- Coordination with state partners and implications for state policy

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Challenges—Moving Forward

- Diversity of audience and different stages of readiness
- Math and literacy skills of teacher-learners
- Sequence and pace—teaching for learning and not coverage
- Professional development sequence—length and number of sessions
- Building capacity of state partners

Iterative Development Research Cycle for the Induction Model

Year 1: Field Test of Module Content

- Analyze Data
- Revise

Year 2: Field Test of Full Induction Model

- Analyze Data
- Revise

Year 3: State-Led Field Test of Full Induction Model

- Analyze Data
- Final Documents Published

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Professional Development - Publications

Castellano, M., Harrison, L., & Schneider, S. (2008). State secondary CTE standards: Developing a framework out of a patchwork of policies. St. Paul, MN: National Research Center for Career and Technical Education. (PDF, 1,049KB)

Lewis, M. V., & Pearson, D. (2007). Sustaining the Impact: Follow up of Teachers Who Participated in the Math-in-CTE Study. St. Paul, MN: National Research Center for Career and Technical Education. (PDF 1,139KB)

Stone, J. R., III, Alfeld, C. Pearson, D., Lewis, M. V., & Jensen, S. (2006). Building academic skills in context: Testing the value of enhanced math learning in CTE (Final study). St. Paul, MN: National Research Center for Career and Technical Education. (PDF 3,181KB)

Stone, J. R., III, Alfeld, C. Pearson, D., Lewis, M. V., & Jensen, S. (2005). Building academic skills in context: Testing the value of enhanced math learning in CTE (Pilot study). St. Paul, MN: National

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