Executive Summary

Improving the Quality of Career and Technical Alternative Teacher Preparation: An Induction Model of Professional Development and Support

Overview

Secondary career and technical education (CTE) is a field in transition. It is moving from a primary focus on preparing students for entry-level employment to preparing them for continuing education and professional development as well as employment. The rapid pace of change in technology and the global economy has created a demand for workers who are able to learn and adapt, and CTE must prepare its students to meet these demands. Greater emphasis is being placed on assessment to improve accountability and to verify that students have acquired the skills to undertake these challenges. These higher expectations come at a time when more students are taking CTE courses and fewer CTE teachers are graduating from undergraduate teacher education programs. The field has responded by recruiting more teachers from business and industry, but those who enter teaching in this way usually have had little pedagogical professional development. Neither these teachers nor many of their colleagues who enter the profession through a traditional teacher education program are prepared to use technical skills to help students gain higher levels of competence.

A New Induction Model

The National Research Center for Career and Technical Education (NRCCTE) responded to these developments with a number of projects. Two of the projects address professional development models for improving the skills of secondary CTE teachers. The Southern Regional Education Board (SREB) developed and tested an induction model for alternatively certified teachers; that is, those who have not completed a traditional teacher education program.

The development of CTE teachers involves complex challenges. One of the most important challenges is the need to build a high-quality teaching force. The new demands and responsibilities on CTE teachers range from integrating grade-level literacy and numeracy to support increased student achievement to designing intellectually challenging projects and real-world problems that will engage an increasingly diverse population of learners. Alternative routes to CTE teacher licensure, embraced for nearly 100 years as a viable way of transitioning those with highly valued industry experience into the teaching profession, are one strategy for meeting the demand for more and better CTE teachers. Although an increasing percentage of teachers is entering the teaching profession through alternative routes, the requirements for these pathways vary greatly, and a debate continues to rage as to whether alternatively certified teachers are less or equally effective as traditionally prepared teachers in impacting student achievement.

In partnership with the NRCCTE, SREB developed an induction model for new CTE teachers pursuing an alternative route to certification that increases their career commitment, competency, and self-efficacy. The model is designed to build the capacity of beginning CTE teachers to offer instruction that is intellectually demanding and standards-focused and thus more likely to improve CTE students' academic achievement. The model also builds CTE teachers' capacity to design instruction that is actively engaging using strategies like project-based learning and cooperative learning. Students who are actively engaged intellectually and emotionally in their high school courses are more likely to stay in school and graduate on time and less likely to need developmental (i.e., remedial) courses at the postsecondary level.

The induction model includes 196 hours of professional development delivered through a 10-day summer institute prior to the first year of teaching; three two-day workshops during the first year; and a second 10-day summer institute at the conclusion of the first year. In addition, the model includes the support of coaching from the professional development instructor, on-site guidance from a mentor and administrator,

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and participation in an electronic community of practice. An iterative development process was used to design the model.

Field Test Findings

The full project report presents the three phases of Year 3, Year 4, and Year 5 field test findings. In the first phase, the content of the professional development modules was field-tested between June 2009 and February 2010 in a series of four sessions each including three six-hour days of professional development. Two of the four field test sessions were held in State 1 and two were held in State 2. A total of 46 teachers participated, representing different levels of education, work experience, and CTE content areas. The results of field test data were clear as to changes needed in induction model materials to meet the needs of alternative route teachers. Many learning activities were revised to fit the audience in order to provide more time for reflection or to clarify content.

Field test participants identified key elements of the modules that they felt would be necessary for new teachers prior to entering the classroom, including: (a) the use of rubrics, (b) formative and summative assessment, (c) how to use a table of specifications to align instructional goals and assessments to technical standards and 21st-century skills, (d) getting to know students, (e) engaging students in developing classroom rules and procedures, and (f) classroom management scenarios. Data suggested that three strategies used by induction model developers were particularly effective in supporting participant learning: (a) use of examples in participants' content areas, (b) use of "floating" one-on-one and small-group coaching during cooperative learning segments, and (c) facilitated small-group discussion in the afternoon or evening to structure reflection.

The results of the induction model's ability to impact teacher commitment, competence, and self-efficacy (2010-2011) are also presented in this report as the Year 4 Phase 2 findings. During the 2010-2011 school year, the induction model and materials were field-tested with a cohort of new State 1 CTE teachers. State 2 was not able to participate because of a lack of internal financial support. The professional development was conducted by SREB staff. The purpose of the field test was to determine the promise of the model to impact new teacher commitment, competence, and commitment to the profession.

Overall, teachers participating in the induction model improved their self-efficacy in instruction, classroom management, and student engagement; teachers were positive about their school working environments; teachers reported that the induction model professional development was intensive, time-consuming, helpful, and applicable instructionally; teacher commitment to the profession remained steady at 80% throughout the school year; 70% of the teacher cohort remained in the teaching profession for the 2011–2012 school year; and the induction model showed promise in supporting the broader context of school reform.

The final phase of field-testing, Year 5 (2011-2012), determined if the induction model could be implemented with fidelity by state stakeholders. Two states field-tested the induction model with a cohort of first-year CTE teachers during the 2011-2012 school year. Instructors in both states were trained on the model by the director of the program, and they were provided with the materials to implement the program in their respective states. Although the two states did not implement the model with complete fidelity, they did achieve successful results. In State 1, 89% of participating CTE teachers were returning for their second year of teaching; in State 3, 88% of teachers were returning. For State 1, the cohort of participating teachers increased their self-efficacy in instruction, classroom management, and student engagement. For State 3, the pre- to post-Teacher Sense of Efficacy Scale scores slightly decreased. Teachers in both state cohorts have made a commitment to remain in the teaching profession for the next five years.

Conclusions

The CTE teacher induction model and findings discussed in this report respond to core needs of the field, but the professional development challenge is far more extensive than these projects alone address beyond the first year of teaching. Secondary CTE serves a large segment of secondary students and must contribute to their academic as well as technical learning. Most CTE teachers will need considerable professional development to broaden their teaching skills and learn to use data for instructional improvement. The professional development they receive should be directly related to the courses they teach and of sufficient intensity and duration to influence their instruction. In the present economic climate, providing adequate time for effective professional development may be the most difficult challenge of all.

The full report was written by Gene Bottoms, Paula Egelson, Heather Sass, and John Uhn of the Southern Regional Education Board. Download it from the NRCCTE's website, www.nrccte.org.

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