BY LAURA GSCHWEND AND ELLEN MOIR



Growing TOGETHER

New and veteran teachers support each other through practices that target the needs of high school educators

nduction, done well, has the potential to act as a professional incubating system that cultivates excellence among this country's secondary teachers. Rosenholtz (1985) wrote, "Effective teachers are 'made' rather than 'born'" (p. 380). When one considers that half of secondary teachers expect to leave their positions by 2010 (National Center for Education, 2005), the statement has even more significance. With massive secondary teacher turnover rates pending, successfully inducting new high school

teachers and administrators must become a central goal in secondary reform. The turnover provides an extraordinary opportunity to both renorm and reinvigorate our nation's secondary schools.

Secondary teachers have induction needs unique to high schools (Alliance for Excellent Education, 2004). How is secondary induction different from other types of induction? What induction program elements need to be in place to specifically address secondary teachers' needs? How might novice growth leverage veteran growth?

The New Teacher Center (NTC) at the University of California, Santa Cruz has applied specific strategies to provide teachers, induction specialists, professional developers, administrators, and educational leaders with an

LAURA GSCHWEND is senior outreach coordinator and secondary specialist at the New Teacher Center at the University of California, Santa Cruz.

ELLEN MOIR is executive director at the New Teacher Center at the University of California, Santa Cruz. You can contact them at the New Teacher Center, 725 Front St., Suite 400, Santa Cruz, CA 95060, 831-459-4323, fax 831-459-3822, e-mail: gschwend@ucsc.edu and moir@ucsc.edu.

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array of secondary induction best practices that help schools reach their student achievement goals.

Induction programs that are catalysts for secondary educational reform have common characteristics. They effectively target secondary teachers' content-specific needs, use mentoring in conjunction with communities of practice, provide content-alike mentoring, fill learning gaps with creative mentoring interventions, and use formative assessment with both new teachers and their veteran counterparts. Secondary schools across the country have added those five components to the foundation of a highquality induction program (see box at right) to meet the distinct needs of new teachers.

TARGET CONTENT-SPECIFIC NEEDS

With content needs so varied among new secondary teachers, what kinds of professional development support most effectively gets at the technical core of secondary teaching?

High school teachers need to be proficient in their academic disciplines. They also face diverse students, including English language learners, who have varying academic needs. Teachers need to know how to effectively differentiate to reach all students, including how to target academic literacy. Three types of ongoing professional development address these needs: monthly seminars; weekly conversations with mentors; and the New Teacher Center Formative Assessment System.

Along with weekly coaching from highly trained mentors, new teachers in NTC programs typically participate in monthly seminars aligned with California's six induction standards. In accordance with those standards, first-year teachers focus on applying content and pedagogy strategies. They also focus on building healthy classroom environments and methods for teaching special popula-

What marks a high-quality induction program?

The New Teacher Center at the University of California, Santa Cruz has found that the most effective induction programs use a comprehensive system of support marked by:

- High-quality, carefully selected mentors:
- Expertly trained, fully released mentors;
- Authentic mentoring processes where teachers routinely reflect on their practices as measured against teaching standards;
- Rigorous and comprehensive use of an effective, researchbased, formative assessment system;
- A standards-based seminar series for new teachers;
- · Collaborative inquiry;
- District/site/professional partnerships;
- Supportive working conditions, including realistic workloads; and
- · Administrative support.

tion students. Second-year teachers focus on acquiring strategies to work with English language learners, using technology in content-area lessons, and supporting equity, diversity, and access to the core curriculum. Each year, new teachers submit portfolios documenting student learning in each of the six areas represented in California's induction standards. Through this sequenced and scaffolded series of professional development seminars, new teachers work with mentors to set professional development goals and meet credentialing standards.

During weekly coaching sessions,

mentors work with new teachers in a variety of ways, including examining their practices, planning lessons, analyzing student work, and/or applying continuums of practice to foster reflection. Mentors, who typically work with as many as 15 new teachers for $1^{1/2}$ to 2 hours each week, also might conduct routine classroom observations and use NTC mentoring tools to collect data. Mentors also commonly demonstrate lessons in new teachers' classrooms and then debrief with the teacher. Finally, mentors emotionally support new teachers.

The NTC Formative Assessment System provides mentoring tools and protocols for collecting evidence of student learning, including measuring growth over time, collecting classroom data, responding to teachers' developmental needs, using diverse assessments, fostering an internal locus of control among novice teachers, and mentoring around professional standards. NTC provides professional learning for mentors focused on mentoring for equity, differentiation, academic literacy, and working with English language learners. All mentors also take part in weekly forums designed to deepen mentors skills in content-area literacy.

LINK NOVICES TO MENTORS AND LEARNING COMMUNITIES

"While mentoring is the most widely practiced component of induction, mentoring by itself is not enough to retain and develop teachers," according to the Alliance for Excellent Education (2004, p. 11). Developing teachers' efficacy one new teacher at a time has merit, but the complexities of secondary teaching require more.

Mentoring strategies that raise staffs' collective efficacy levels result in the greatest gains for both novice and veteran teachers, as well as their students. Collective efficacy refers to teachers' beliefs that as a group they can effectively organize and execute courses of action that will raise student achievement (Goddard, Logerfo, & Hoy, 2004). Goddard concluded that teachers' professional learning should emphasize skills and attitudes that build their collective efficacy.

One method for building collective efficacy in high schools is forging communities of practice that blur the lines between new and veteran teachers. In high schools, communities of practice are characterized by strong teaching cultures, collaborative practices, and a shared repertoire of resources and history (McLaughlin & Talbert, 2001). Some high schools have existing structures that foster collaboration between novice and veteran teachers. Where they do not exist, however, they can be built.

In one California high school, for example, an embedded NTC staff member facilitated the new teacher induction program while also leading year-round veteran teacher professional development for the school's four career-based small learning communities.

The NTC staff member pioneered a 20-day summer learning laboratory for 42 new and veteran teachers who worked in interdisciplinary teams of four to teach 323 students, one-third of whom were at-risk incoming 9th graders. Each morning, teachers spent two hours together learning about differentiating instruction. When students arrived, the teachers taught in teams. After classes, teachers analyzed student work, collaboratively designed lessons, and reflected on their practices, including spending time in critical conversations with trained mentors who were in their classrooms daily.

What effect did this professional learning intervention and summer learning laboratory have on students and teachers? Studies of student achievement and teacher learning showed student test scores at the target school were higher than those of

What factors make high school induction distinctive?

Induction experts and existing research identify the following characteristics as being essential for high school teacher induction:

- · Use mentors in the same subject area to help teachers develop deeper content knowledge.
- Inculcate ongoing literacy and numeracy strategies in novice teacher training. One out of every four secondary students has not yet mastered basic reading and math skills; secondary teachers must learn strategies for teaching literacy and numeracy across the curriculum for all students.
- Train mentors and new teachers to work effectively with English language learners.
- Ensure that teachers are given regular, structured time for induction activities, such as common time for planning and collaboration.
- Provide special assistance for teachers who have content knowledge, but nontraditional teaching preparation.
- · Create a positive working environment and realistic workload; avoid assigning new teachers to the most difficult classes, making them commute to various classrooms throughout the day, requiring numerous teaching preps, and asking them to lead extracurricular activities.

Adapted from the Alliance for Excellent Education, 2004, pp. 20-21

similar schools within the district (Strong, Achinstein, Fletcher, & Millhollen, 2005), incoming 9th graders enrolled in the summer institute had above-average scores on a norm-referenced test and scored above the proficient level on the California Standards Test, and novice teachers demonstrated evidence of reformminded teaching, while experienced teachers also improved their practices.

Effective induction programs employ high-quality mentoring systems while also embedding communities of practice within secondary schools.

USE MENTORS WHO TEACH THE NOVICE'S SUBJECT

Teachers' subject-area expertise should affect decisions about who should mentor whom. In high schools, academic disciplines play a central role in maintaining teachers' identities and norms of practice (McLaughlin & Talbert, 2001).

New teachers are more likely to

continue teaching in their schools of origin when they are mentored by experts in their own subject areas (Smith & Ingersoll, 2004). And mentors' skills are maximized when they coach new teachers from similar content areas (Smith & Ingersoll, 2004). Optimally, secondary induction programs should use content-alike pairings between mentors and new teach-

When a school lacks the resources to match new teachers with contentalike mentors, a teacher in a different content area certainly can coach a new teacher. For most programs in this country, that is the norm. However, inexpensive alternatives do exist. One method includes adding a second mentor as a content consultant to the primary mentor. For example, a new algebra teacher lacks access to a math mentor, so his induction mentor regularly consults with a content specialist to be able to assist the new teacher in meeting his contentbased induction standards. In some

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situations, the induction mentor and the content specialist regularly meet to analyze work from the new teacher's students, to observe in the new teacher's classroom, and to review curriculum. The induction mentor focuses on pedagogy and licensing, while the content expert focuses on connecting subject matter to pedagogy.

Adding a content expert to the mentoring mix can more fully support new secondary teachers in their development.

ADDRESS CONTEXT NEEDS AND TEACHER LEARNING GAPS

Beyond the typical mentoring practices used in induction around the country, the New Teacher Center has found that secondary schools need newly tailored approaches. For instance, to address new secondary teachers' specific context needs, the NTC has expanded its practice of oneon-one mentoring to include group mentoring. In some high schools, mentors work with groups of veteran and new teachers in department- or grade-level teams. By collaboratively analyzing student work, co-planning lessons, and discussing interventions with case study students, mentors provide emotional support and instructional expertise for both veteran and new teachers. Group mentoring, whether in content teams or interdisciplinary teams, helps close learning gaps because it increases teachers' ability to transfer new learning to content-area classroom contexts.

For example, the high school department chair's role typically is ill-defined and focused more on paperwork than teaching and learning. In addition, the chair's role as a route to improvement often is overlooked. Administrators come and go, especially in urban high schools, but department chairpersons usually remain. Department heads can act as change agents for instruction, revitalize and

Facts about the New Teacher Center

- Founded in 1998 by Ellen
 Moir, the New Teacher Center
 (NTC) at the University of
 California, Santa Cruz provides
 vital leadership across the
 country through advocacy for
 intensive teacher and
 administrator induction.
- NTC's mission is to improve student learning by supporting the development of an inspired, dedicated, and highly qualified teaching force.
- NTC's induction model was based on the work of the Silicon Valley and Santa Cruz New Teacher Projects that have supported more than 10,000 California novice teachers.
- Recent induction work in New York City has resulted in 339 trained mentors for nearly 6,000 new teachers.
 Partnering with urban, suburban, and rural districts in 34 states, NTC disseminates effective induction practices and technical assistance to K-12 schools, including charter and small high schools.
- Learn more at www.newteachercenter.org.

renorm teachers' instructional expertise, and foster healthy collegial relationships.

In one suburban high school in San Jose, Calif., in 2005, mentors were assigned to each of the school's academic department chairpersons. Mentors helped the chairs lead their departments through an intense professional development process redesigning a course in which student achievement levels had historically

been low. At the end of the year, each department had made progress in ensuring that the designated courses met content standards, that teachers had developed common assessments and archived them for future new teachers, and that teachers were able to use differentiated instructional strategies.

Mentors can work one-on-one or with groups of new and veteran teachers to offer increased options designed to maximize teacher learning.

Mentors, in newly adapted roles, also can work with department chairpersons. Tailored approaches offer an array of possibilities for expanding mentoring roles in secondary settings.

HAVE NOVICE AND VETERAN TEACHERS SHARE FORMATIVE ASSESSMENTS

Effective induction programs allow new teachers and their mentors time together to systematically set professional goals and monitor and reflect on professional growth. Novices and veterans work together to analyze student work; discuss growth using an NTC mentoring tool that allows each new teacher to identify what is working, what challenges the teacher faces, and next steps; develop their own learning plans; create common assessments; and observe in each others' classrooms. Veteran teachers who are not mentoring are less likely to experience these tools for professional learning. Developing a mentoring program around these protocols builds teachers' connections and strengthens the skills of both novice and veteran.

In one Santa Cruz County high school, for example, an NTC staff member worked with a department of 18 math teachers, five of whom were new teachers, focusing on increasing English language learners' success in Algebra I. In 10 after-school sessions over five months in 2003-04, teachers reviewed research studies describing

the strengths and challenges of students learning English as a second language and developing reading skills. The teachers considered essential ideas from these studies in light of the specific language and reading skills students needed to be able to apply Algebra I concepts. Each teacher conducted a case study, applying ELL strategies and monitoring the strategies' effect on a group of English language learners during a unit. An experienced site facilitator/mentor supported the teachers. The teachers then presented the results of their projects to two small groups that included other workshop participants and site and district administrators (Bongolan, 2006).

Algebra teachers involved in this project continually monitored data on students' language development and individual achievement and found achievement in the subject area improved markedly, especially in solving word problems and understanding the text. Participating teachers reported increased motivation for collaborative inquiry and skill in addressing ELL needs (Bongolan, 2006).

When adult learners on secondary campuses engage in rigorous, consistent, and powerful conversations about formative assessment, teachers gain effectiveness and students improve achievement. New and veteran teachers grow best when they grow together.

CONCLUSION

High school teachers navigate an especially complex cultural terrain (McLaughlin & Talbert, 2001).

As a result, induction programs must address their unique issues.

Consensus is emerging as to what constitutes high-quality induction for all teachers. However, fewer than 1% of current new K-12 teachers in the United States experience this kind of comprehensive induction package (Smith & Ingersoll, 2004). Much

work needs to be done before every teacher has access to a comprehensive induction program.

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