This publication presents several articles on teacher development and improvement: "Teacher Development: A Strategy for School Improvement" (barriers to and features of effective teacher development); "Help Wanted: Recruiting and Keeping Quality Teachers" (teacher incentives, beginning teacher induction, teaching conditions, and teacher satisfaction); "What Makes a Good Mentor?" (e.g., being a role model, having interpersonal skills, and being a good listener); "Changing Practice with Collaborative Inquiry" (conducting school-based action research); "Virtual Communities of Learners" (participating in online forums and group listserves in order to share and network with other teachers); "Alternative Routes to Certification" (such programs are making a significant impact on the nation's need for qualified teachers); "Finding What Works in Teaching and Learning" (National Staff Development Council standards for staff development); "Classroom Teachers in Conversation" (the importance of providing teachers time to talk and share); and "Research Review: What is a Teacher Community?" (what makes a teacher community different from a gathering of teachers). Selected Educational Alliance programs with information and services for teachers are listed. (Contains 19 references.) (SM)
Teacher Development: A Strategy for School Improvement

Cynthia Way, Ed.

LAB Education Notes v3 n2 Nov 2001
Teacher Development: A Strategy for School Improvement

Teachers are the agents of change for students and for schools. One key to improving schools is fostering teacher development - professional growth opportunities in which teachers develop their craft, shape school practices, and build learning communities. In the majority of cases, however, professional development activities continue to be delivered through ineffective, short-term models that are unrelated to school goals and real student work. Historically, professional development has generally been conducted outside the lines of resources and policy priorities. The situation is critical: The teaching field expects to lose two million teachers in the next ten years; currently, there are an unprecedented number of teacher shortages; high teacher turnover disproportionately affects urban districts; and an increasing number of new teachers, who require training, are entering the field. One strategy is building “high-performing professional learning communities” in which high-quality teacher development initiatives, supported by school structures and district policies, provide teachers with the resources needed to improve student performance.

High-quality teacher development can provide consistent methods for helping new and experienced teachers meet the needs of students; it can foster a collegial work environment that enables all teachers to learn from one another and generate ideas that expand the educational possibilities of the school. However, teachers may encounter obstacles in receiving the type of training they need. Schools face many challenges in establishing teacher development initiatives, such as defining their school improvement needs, developing strategic teacher development plans, and finding resources to support their initiatives (ranging from time during the school day to access to technology). Districts are in the difficult position of assigning standards, policies, practices, and professional development opportunities that unify and satisfy the complex needs of constituencies.

Another major hurdle is attaining and allocating financial resources. Tracing the numbers to identify how much funding is invested in professional development is not a straightforward task. Federal, state, and local education agencies emphasize different programs. Regarding the Northeast region, budgets for professional development have focused on upgrading certification programs and reducing shortages of qualified teachers in high need areas. With the advent of site-based management, principals are grappling with how to distribute funds. How do we align resources and policy priorities with the current need for and demands upon teachers? Assuming resources are in place, how do we then align teachers’ needs with students’ needs?

In addressing such questions and challenges, the LAB’s Teacher Development

Help Wanted: Recruiting and Keeping Quality Teachers

The call to recruit and retain quality teachers is of national concern. For many districts, teacher shortages have arrived. According to a recent survey, 97 percent of urban districts report an immediate need for science and special education teachers; other acute areas of need include mathematics, bilingual, and educational technology teachers. Furthermore, 77 percent of total urban and suburban administrators describe overall teacher shortages.

These shortages are likely to become even more widespread. Along with forthcoming waves of teacher retirement, student enrollments are growing. Most of today’s teachers cluster in the over-40 age range, only a decade or two away from retirement. The increasing numbers and diversity of the student population intensify the need for and demands upon teachers. Many school reform initiatives on local and national levels call for a decreased student-teacher ratio, making issues of teacher recruitment, training,
Teacher Development continued from page 1

area examines the policies, interventions, and procedures needed to support teacher development and continuous school improvement. The LAB is strong in its belief that effective teacher development is:
- focused on student outcomes,
- collaborative in practice,
- linked to subject matter,
- part of teachers' day-to-day culture, and
- tied to the schools' improvement processes.

In order for teachers to improve student outcomes, they need to agree on a cohesive, feasible priority for student learning; make effective use of both locally generated and standardized data; and work in a school environment that supports teacher learning for student learning. Teachers need opportunities to learn from each other, to learn over time, and to develop habits of mind that sustain a reflective teaching and learning practice. They need a supportive professional community of teachers and advocates dedicated to the potential of the field.

Help Wanted continued from page 1

and retention paramount. Teacher quality, not just increasing the number in the teaching force, remains a top national priority.

Caught between the twin pulls of quality and quantity, districts and states are trying creative strategies to recruit teachers and to expand the pipeline of teacher candidates. From signing bonuses (Massachusetts) to overseas recruitment (Illinois, Texas, New York), some states are aggressively “thinking outside the box.” Many states have created alternative certification programs. Meanwhile, many districts and schools are coping with present shortages as best they can, often resorting to emergency certification in the interim.

Much less attention has been focused on retaining the quality teachers currently at work in schools. Developing strategies for keeping teachers — in the face of turnover and attrition — is another way to combat shortages. As of 1994, the national teacher attrition rate (representing those who leave teaching altogether) stood at 6.6 percent. Rates for brand-new teachers are much higher: Roughly 30 percent of all beginning teachers leave the profession within three years. What can states and districts do to keep their best new and veteran teachers?

Incentives. States and districts are using incentives to recruit new teachers and keep them once they have been hired. These incentives range from loan forgiveness to signing bonuses and even to district-sponsored housing loans. Some states, Florida for example, are revamping their retirement plans to encourage more veteran teachers to stay longer. Other states are offering salary differentials to those who will teach, and stay, in high-need locations. Most of these incentives are structured over several years to emphasize retention, not just short-term recruitment goals.

Induction. Since new teachers leave at higher rates, many states and districts are creating induction programs, which provide extra support, training, and guidance to initiate beginning teachers into the school environment. In fact, up to 50% of all new teachers participate in an induction program of some kind, ranging from follow-up support from a university certification program to various services provided by schools, states, and districts. In many cases, an induction program may consist of little more than a one-day orientation session. Some forms of novice teacher induction are significantly more extensive, however. Spanning a three-year period, they can provide new teachers with on-going coaching and professional development as they hone their instructional and classroom management skills. Though definitive data is not yet available, preliminary research shows that more high-quality induction increases teacher retention.

Work environments and teacher satisfaction. Not all school environments experience the same degree of teacher turnover and attrition. Small private schools, for example, exhibit the highest rates of turnover, followed by high poverty public schools. Clearly, some school environments create additional challenges and stresses for teachers. According to recent research by Ralph Ingersoll at the Center for the Study of Teaching and Policy, teacher turnover and retention should be analyzed from an organizational perspective. Looking at national data, he concludes that “improvements in the conditions of the teaching job, such as increased support from school administrations, increased salaries, reduction of student discipline problems, and enhanced faculty input into school decision-making would all contribute to lower rates of turnover.”

In a Cranston, Rhode Island elementary school, community members recently planted a flowering bush at the retirement, after 30 years, of the school's first grade teacher to commemorate the “blossoming” of young minds over her long career. Though retirements will naturally continue, we need to carefully tend the soil of teachers' careers. Keeping quality teachers and creating supportive environments for their long-term development will remain a central challenge for schools in the coming years.

Resources:
For further information and online resources, visit Recruiting New Teachers http://www.nct.org
What Makes a Good Mentor?

Who was Mentor? Mentor was the friend of Odysseus. When Odysseus went on long journeys, he entrusted Mentor with his son, Telemachus. Mentor’s role was to provide advice, guidance, and support to Telemachus in his father’s absence.

Teachers are our children’s mentors, but who is mentoring our teachers? As new teachers enter the education system or experienced teachers confront challenge and change, mentors provide valuable support systems. Furthermore, LAB research shows that mentoring, collaboration, and conversation among teachers foster high-quality teacher development.

In the United States and many other countries, both informal and formal programs mentor teachers. Additionally, teacher induction programs, which are designed to train and assimilate new teachers, include mentoring as an integral component of orientation. Although many programs traditionally focus on the needs of new teachers, many schools and districts acknowledge the benefits of more extensive and inclusive programs as needs arise for teacher development. Mentoring programs help new and experienced teachers navigate terrain such as: integrating state or district curriculum frameworks; understanding school cultures and contexts; developing classroom management skills; and expanding teaching strategies to meet the specific needs of students in their school.

Effective mentoring requires a highly skilled and knowledgeable teacher to act as a mentor. However, not all good teachers make good mentors. Because mentoring is multi-faceted, the proper identification and training of mentors is essential to establishing mentoring expectations and criteria for consistently successful programs. “A dedicated, experienced teacher, becomes an effective and accomplished mentor by design and training, not by chance”(Porter, 1988).

First and foremost, mentors must be role models. Mentoring is about exemplifying professionalism as much as it is about imparting knowledge and experiences. Mentors need to have good interpersonal skills and a willingness to help teachers who may be struggling to find their way. Mentors need to listen to problems with an empathetic ear and help strategize a variety of problem-solving approaches with their protégés. Part coach, part advocate, a good mentor will train the protégé and build instructional skills, encourage and explore new strategies, and even arrange additional professional development opportunities.

While there remain many resource-related challenges for schools in offering such programs, many schools and districts have come to realize that mentoring programs benefit all teachers involved, not just beginners. In the early 1990s, motivated by predictions of teacher shortages, many schools formalized teacher mentoring as a common approach to addressing recruitment and retention issues. Based on this experience, schools and districts acknowledge that the mentoring process can impart the values of the district, establish expectations for standards-based instruction, and guide teachers in their assimilation into the many constructs of teaching and learning.

In many effective programs, mentoring is structured over a two and sometimes three-year period. Year one typically concentrates on classroom management issues, lesson development, and pedagogy; year two and three often focus on a deeper understanding of standards-based instruction, curriculum, assessment, and the refinement of classroom practices. Model programs invite protégés to observe exemplary instructional practices and to have pre- and post-conferences that isolate issues and topics relating to the protégé’s needs. State departments of education can be very helpful to schools and districts by providing guidance in designing, planning, and implementing teacher induction and mentoring programs. Numerous Web resources are dedicated to helping schools address teacher recruitment and retention through mentoring programs.

What can the guided offer the guide? Mentors often report that their involvement with a protégé has generated or renewed their own interest in the content area and the craft of teaching. The exchange enables both mentor and protégé to reflect upon and refine their practice. Moreover, the professional collegiality that develops between new and veteran teachers helps unite school communities. The journey of teaching and learning never ends, even for Mentor.

Resources:

The following Web sites offer information on various aspects of mentoring:

- https://www.mentors.net
- https://www.rwru.org/request/imay01/index.htm
- https://www.ssec.org/teachingroom/books/gordon00book.htm
- https://www.rusc.edu/box/education/CMMR/CMMR_BTSA_home.htm
- https://www.csss.org/totesc.htm
- https://www.nsde.org/
- https://www.rnt.org
Changing Practice with Collaborative Inquiry

Change begins with dialogue; it happens with support. In teacher development, the collaborative inquiry process engages educators in dialogue with each other and facilitators/coaches, developing ideas that ultimately shape practice. This professional and collegial approach toward improvement works because it encourages mindful reflection upon core dispositions in teaching and their impact upon student outcomes.

The facilitator’s role is to guide discussion, as shown in this facilitator’s comment, published by the National Staff Development Council: “Our job is not to come up with ten solutions for someone’s questions. It is to think of questions that we can ask that will help participants come up with solutions for themselves. We have to learn to be quiet until a person has time to do his or her own thinking. This pushes the person to think more about the question and not leave the meeting with strategies that belong to someone else. It is really the key to becoming a thoughtful, reflective practitioner. Facilitators must model, model, model this behavior.” Similarly, the process asks participants to “be good listeners and to ask the group member, who is talking about his or her issues, good questions.”

One useful methodology of collaborative inquiry is action research, a process of conducting teacher development as integral to the actual work being explored (often referred to as job-embedded). Led by researchers/coaches, action research takes place in real settings with real educators and real students and families over a period of time.

As the literature shows, conducting such school-based action research positively affects teachers’ practices. One reason is that teachers have greater personal investment in teacher development activities that they both choose and generate. Through the action research process, teachers begin to study aspects of student learning in their setting that they may not otherwise have noticed, become more analytically reflective about their practice, and ultimately change their practice. As one participant in a LAB program stated, “Action research helped me to focus. This work re-instilled a belief in me that we can create change.” The power of action research primarily comes from educators focusing on their own practices using locally generated data; the process becomes embedded in the context of work done each day. “Collecting evidence made a difference in my practice. I didn’t flounder as much,” said another LAB participant.

As a result, teachers gain better understandings of the teaching/learning relationship, student styles of learning, ways to link teaching methods with student styles, and the foundational beliefs that drive their practice. In a relatively short time, teacher confidence increases.

There are several ways educators could both collaborate and inquire about their practices. In action research models, the process begins with exploring classroom or building-wide issues, creating a topic question designed to provide greater understanding about that issue, constructing a method for generating viable evidence, collecting and interpreting the evidence, and finally, reviewing the practice through the lens of the data representing the process. Thus, a full cycle of action research is completed and another may begin.

Based on the precept of collaborative inquiry, the LAB has been conducting an extensive Strategic Teacher Development program. Two generations of LAB action research work have produced significant findings. The first cycle involved more than twenty teams around the region over a two-year period. Documentation through post-experience interviews provided some guidelines for LAB researchers to employ in the second cycle. Nine teams ventured into the action research process with LAB coaches and seven completed the next cycle (more than double the proportionate number of comple-

Collaborative:
Two or more people exchanging ideas and learning from each other.

Inquiry:
Asking questions, probing for deeper understanding, constructing knowledge, using evidence, and informing new perspectives.

Collaborative Inquiry:
A process devoid of judgment and advice, yet laden with listening for understanding, supportive probes for clarity, and open-minded reflection of “what is” in an effort to construct “what is better.”

“This was a benefit, a boost, a novel approach that kept me on track for extended periods of time.”

— Teacher involved in collaborative inquiry
Changing Practice continued from page 4

tions in the first cycle). The factors generating the highest level of success were administrative support, frequent contact between the LAB and the site, the number of presentations made by teams, and attendance at LAB meetings.

The following graph portrays documentation of the participants’ perceptions of their progress in five areas (identifying success factors in teacher development):

- from working individually to working as a team (Teamwork);
- from working in an isolated fashion to working collaboratively (Collaboration);
- from teacher development that was judged to be superficial (with respect to their actual work) to embedded in their daily work (Job-embedded);
- from infrequent engagement in teacher development to ongoing activity (Ongoing); and
- from making decisions largely out of speculation to making decisions based on more complete, rich evidence (Evidence-based).

Participants showed dramatic progress in their thinking and practices, effectively doubling their activity in each area. Some participants described the process as challenging. “Having an administrator on the team caused some hesitation. However, it was better to have that perspective at the table and to also have support from administration. It cleared a lot of red tape!” Other participants found the process both personally and professionally rewarding.

“[This has taught me not to be afraid to try something different.]” “I have learned to value collaboration.” This action research work has provided the foundation for a new cycle of Strategic Teacher Development, taking place now in eight sites in the region.

Resources:
A LAB Guidebook on Action Research is available by contacting: publications@lab.brown.edu or download directly through our Web site (http://www.lab.brown.edu/public/pubs/pub_index.shtml)

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Success Factors in Teacher Development

<table>
<thead>
<tr>
<th></th>
<th>Teamwork</th>
<th>Collaboration</th>
<th>Job-embedded</th>
<th>Ongoing</th>
<th>Evidence-based</th>
</tr>
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<tr>
<td><strong>Before</strong></td>
<td>19%</td>
<td>17%</td>
<td>24%</td>
<td>23%</td>
<td>22%</td>
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<tr>
<td><strong>After</strong></td>
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<td>39%</td>
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Before and After Participation in Action Research Project
Virtual Communities of Learners

For teachers searching for ways to share their knowledge and learn from others, going online is becoming a common occurrence. By visiting online forums and group email lists (listservs), teachers can enter into lively exchanges of questions, observations, and strategies that come directly from the classroom experience. Based on this phenomenon, a number of questions arise regarding the impact of virtual communities upon teacher development. What do virtual communities offer as a way to support teacher learning? How might this kind of teacher development benefit schools and students? Do these online discussions offer elements of high-quality teacher development, such as collaboration among teachers and relevance to students’ needs? In order to understand teacher development in virtual communities, a key might first be to unlock the puzzle of how teachers learn in practice—that is, when they are busy doing the work.

The LAB, through its work in Teacher Development, is helping to address these questions and to define how virtual communities can deliver and support teacher learning. This work builds on the LAB’s knowledge base in developing and understanding the uses of online learning environments (Electronic Collaboration, 1999). It also is informed by learning research on “communities of practice” (Lave & Wenger, 1991) and “knowledge ecologies” (John Seely Brown, 2000). Lave and Wenger conjecture that individual learning and practice are intimately tied together, and it is through participation with groups of people, referred to as “communities of practice,” that this learning naturally occurs. Expanding on this concept, John Seely Brown notes that electronic environments such as the Web create new tools and opportunities for social engagement that can help shape an open, distributed learning environment—a “knowledge ecology” for users. Thus, it would seem that online environments create a viable means of interactive learning for teachers and by teachers who are engaged in practice.

For those curious about whether virtual communities support teacher learning, the best evidence to date might be in the online conversations themselves, which bring to light important elements of high-quality teacher development. One such virtual community is found on the CESAME Support Site for Investigations in Number, Data, and Space, an elementary mathematics curriculum; the project is a collaborative effort between the LAB and the Center for Science and Mathematics Education at Northeastern University. In an example from the Investigations discussion, a first grade teacher describes how she assists students who are struggling to communicate their thinking about mathematical problem-solving because of low-level writing skills. While the children can orally explain how they solved the math problem, saying for example, “I counted in my head,” they get anxious about spelling and choose to write what they can spell rather than present their strategies. Her solution: “Now when we share our ideas during ‘circle time,’ I write down in words in a blank chart book everything that they say.” As a result, students are expanding their vocabulary. Building on this topic, another teacher offers an idea that taps into visual thinking skills. “If she [the student] tells you she put a number in her head, [ask her to] draw a head with a think bubble and write the number.” Through this online discussion, teachers have an opportunity to talk about their students’ needs and offer alternate means of expression and reflection that reinforce learning.

The CESAME Investigations Web site is a valuable resource for curriculum implementation and serves as an efficient vehicle for ongoing teacher development. As Paul Hickman of CESAME notes, “Instead of teachers learning content and pedagogy separately, they learn both, and what they learn is directly related to what they need to teach.” The site has a discussion area, opportunities for peer partnering, as well as feature articles on implementation and an “Ask the Author” feature. Site users have also written articles on topics such as developing rubrics and communicating with parents. Wendy Gulley, who manages the Web site, says that it helps address the gaps in the typical district model where K-5 teacher development focuses on a new subject area each year. “This year math, next year science. Online communities can serve the teachers for longer,” she adds.

“Learning and teaching should not stand on opposite banks and just watch the river flow by; instead, they should embark together on a journey down the water.”
— Loris Malaguzzi, founder of the Reggio Emilia School in Italy. Quoted in The Hundred Languages of Children
Virtual Communities continued from page 6

Another illustration of collaboration is found in online conversations on a Web site named, Nanduti, and a partner listserv, Nandu, which connect a group of early foreign language educators; it is a joint effort between the LAB and the Center for Applied Linguistics (CAL). An early foreign language studies teacher using the Nandu listserv asked how to get started in planning and integrating Spanish and social studies curriculum. One answer was: “I’m not sure that there will be adequate commercially-made material for you to purchase to go along with your topics, but I’m sure we can come up with suggestions for teacher-made ones, which I find are the best, anyway, in my experience.” In addition to providing the means for teachers to connect with one another, online conversations can offer direction and information relevant to classroom practice.

The online community is a significant resource, according to Nancy Rhodes and Ingrid Pufahl of CAL and Nandu, because foreign language specialists frequently may find themselves relatively isolated in their schools. Curriculum development, student motivation, and improving student performance are regular topics on Nandu, and exchanges often involve sustained interactions among several participants. “The online community provides them with an easy way of engaging in meaningful, sustained discourse with their peers, who share their interests, concerns, and challenges but may be separated from them in time and location,” says Pufahl. Some benefits of teacher development online are that teachers from different schools become participants in a communal dialogue, creating a safe environment in which to discuss challenges in their work and to learn from others.

Both of these instances are part of a growing body of research and a commonsense approach to teacher development that highlight teacher collaboration and dialogue, sustained engagement, and the connection of what is being learned to classroom practice. While face-to-face activities might be a tried and true method, significant challenges still exist in making this kind of teacher development possible. For many teachers finding time to meet on a regular basis remains a luxury. Other teachers find themselves in the position of leading their schools’ efforts to put new standards or curriculum into place with little preparation provided. Virtual communities of learners have become one avenue to which teachers are turning in hopes of finding solutions to these problems. More needs to be learned about virtual communities and how are they making an impact on teacher development as it moves from a traditional training model to a practice- and inquiry-based approach. While not replacing the need for in-person contact, the online environment does offer another valuable source and reciprocal opportunity for teacher development, which in turn leads to improved student learning.

Alternative Routes to Certification

Navigating the route to alternative teacher certification is a tricky process. Each state has different criteria for traditional teacher certification and different programs for nontraditional, or alternative, certification. Approaching the state education department for information and programs is the first step, but then a prospective teacher faces many challenges regarding the selection of the right program, the development of skills, the quality of preparedness, and above all, the ability to meet the learning needs of students.

The alternative teacher certification movement has emerged in response to the states’ and districts’ needs for more and better qualified teachers. While the notion of teacher shortages has received a great deal of attention in the educational press, states have only recently begun to focus on who prospective entrants to the teaching field are and how that group has changed over time. More and more, individuals are beginning their preparation for teaching at the post-baccalaureate level. Many choose to enter teaching after completing degrees in fields other than education. An increasing number of entrants to teacher preparation programs are transitioning to teaching from non-education careers. A large and growing number of older professionals – some retired – are drawn to teaching after careers of many years in a variety of fields. The challenge is for alternative certification programs to capitalize upon a prospective teacher’s existing skills, while developing teaching methods that reach an increasingly diverse student population.

Alternative Routes continued on page 8
Alternative Routes continued from page 7

Because of this complex set of needs, alternative teacher certification programs take many forms. Programs may be designed by states or by institutions of higher education. The goals may be to address a particular shortage—often in a specific subject or grade level, or to attract talented individuals, or both. Some programs target participants with experience in education, while others seek out graduates or professionals from other fields.

Key elements in most intensive programs include mentors, coursework, and professional development focused on theory and practice. In less intensive programs, the academic and professional background of individuals may be reviewed and a program designed to address specific gaps in preparation. In some states emergency certification and waiver programs allow individuals to teach temporarily, while successfully completing certification requirements. Nearly all states recognize at least one alternative route to certification, and some states offer a combination of programs.

Limited research has been conducted on the effectiveness of alternative teacher certification. With differing approaches from state to state, one barrier to making informed comparisons between programs is the lack of a universally accepted definition of alternative teacher certification. To clarify the distinction between types of alternatives, the National Center for Education Information (NCEI) has identified several categories of alternative certification. NCEI has also established criteria for exemplary teacher certification programs.

An exemplary program should be:

- targeted to talented individuals who already have a bachelor’s degree;
- designed to address the specific teacher needs of a particular geographical area by preparing new teachers who will ultimately fill those positions;
- composed of:
  - a rigorous screening process;
  - a field-based program;
  - coursework and/or professional development before and during placement in a teaching position;
  - mentoring; and
  - high performance standards.

In 2000, NCEI identified 12 states with exemplary alternative teacher certification programs: Arkansas, California, Colorado, Connecticut, Delaware, Illinois, Kentucky, Maryland, New Jersey, New Mexico, Pennsylvania, and Texas. One example is Connecticut’s Alternate Route to Teacher Certification program, a joint effort of the Connecticut Department of Education and the Connecticut Department of Higher Education. The program entails an intensive, eight-week, full-time study, after which participants are placed as full-time teachers. Once placed, these new teachers participate in the Beginning Educators Support and Training (BEST) Program, which extends through their first and second years of teaching. BEST provides participants with ongoing professional development, mentoring, feedback, and evaluation. A special supervision plan is developed for each participant. The program accepts candidates who hold a bachelor’s degree with a major in a field closely related to the prospective subject area as well as some teaching experience, and they must maintain a B average and pass PRAXIS exams to complete the program successfully.

Alternative certification programs are making a significant impact on the country’s need for qualified teachers. As of 2000, an estimated 125,000 teachers nation-wide had been certified through the various alternative certification programs. In New Jersey, alternative programs have been the greatest source of qualified new minority teachers. Still, definitive research on the effectiveness of alternative programs in terms of high quality teaching and student achievement is yet to come. Many questions are of concern:

How well do alternative certification programs prepare teachers? What type of teacher development do they receive? What are the most important criteria to maintain across certification programs? Ultimately, what is the impact of alternative teacher certification upon student learning?
Finding What Works in Teaching and Learning

Educators looking for guidance in restructuring their professional development efforts can find inspiration on the Web. One LAB resource is the online tool, The Knowledge Loom: What Works in Teaching and Learning. The Web site provides a variety of evidence-based educational practices, stories about schools successfully using those practices, and links to supporting Web resources. Most importantly, it provides the tools to provoke discussion about these practices, so that educators can share ideas with others both locally and nationally.

The Knowledge Loom content is always growing. Currently, it spotlights key education topics, including early and adolescent literacy, middle school math, technology leadership, technology in the classroom, working with culturally diverse populations, developing school-family-business partnerships, as well as best practices for professional development itself. Access the Spotlight on Professional Development to view the research supporting these principles and share your own tips for success: (http://knowledgeloom.org/pd).

A new companion Guidebook, Using The Knowledge Loom: Ideas and Tools for Collaborative Professional Development, provides direction in using The Knowledge Loom content to foster improved teaching and learning. The Guidebook offers step-by-step activities that professional development facilitators can adapt to a particular school’s initiative. Facilitators can use the Guidebook to help groups of educators identify areas for improvement in their school, research best practices on The Knowledge Loom, and finally create an action plan to meet short- and long-term goals for school improvement. Educators are encouraged to use The Knowledge Loom and the Guidebook as vehicles in support of larger, continuous school improvement initiatives.

These practices are in tune with current research and standards for professional development. The National Staff Development Council (NSDC), a non-profit association, views high-quality professional development programs as essential to creating schools in which all students and staff members are learners who continually improve their performance. The NSDC recently revised their standards, guided by three questions:
- What are all students expected to know and be able to do?
- What must teachers know and do in order to ensure student success?
- Where must staff development focus to meet both goals?

The NSDC 2001 Standards for Staff Development (see chart) identify what works best, promoting such practices as collaborative learning communities and research-based approaches. The NSDC’s Web site provides a wide variety of helpful resources and ways to see how others are applying the standards.

<table>
<thead>
<tr>
<th>National Staff Development Council (NSDC) Standards for Staff Development (Revised, 2001)</th>
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<tbody>
<tr>
<td><strong>Context Standards</strong></td>
</tr>
<tr>
<td>Staff development that improves the learning of all students:</td>
</tr>
<tr>
<td>• Organizes adults into learning communities whose goals are aligned with those of the school and district. (Learning Communities)</td>
</tr>
<tr>
<td>• Requires skillful school and district leaders who guide continuous instructional improvement. (Leadership)</td>
</tr>
<tr>
<td>• Requires resources to support adult learning and collaboration. (Resources)</td>
</tr>
<tr>
<td><strong>Process Standards</strong></td>
</tr>
<tr>
<td>Staff development that improves the learning of all students:</td>
</tr>
<tr>
<td>• Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement. (Data-Driven)</td>
</tr>
<tr>
<td>• Uses multiple sources of information to guide improvement and demonstrate its impact. (Evaluation)</td>
</tr>
<tr>
<td>• Preparers educators to apply research to decision making. (Research-Based)</td>
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<tr>
<td>• Uses learning strategies appropriate to the intended goal. (Design)</td>
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<tr>
<td>• Applies knowledge about human learning and change. (Learning)</td>
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<tr>
<td>• Provides educators with the knowledge and skills to collaborate. (Collaboration)</td>
</tr>
<tr>
<td><strong>Content Standards</strong></td>
</tr>
<tr>
<td>Staff development that improves the learning of all students:</td>
</tr>
<tr>
<td>• Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement. (Equity)</td>
</tr>
<tr>
<td>• Deepens educators’ content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately. (Quality Teaching)</td>
</tr>
<tr>
<td>• Provides educators with knowledge and skills to involve families and other stakeholders appropriately. (Family Involvement)</td>
</tr>
</tbody>
</table>


Resources
- Find The Knowledge Loom and Guidebook at: http://knowledgeloom.org
- Find the NSDC website at: http://www.nsdc.org/educatorindex.htm

LAB Education Notes / 9
Every conversation between two professionals is professional development. When schools are designed so that teachers have time to talk to one another and have input into curricular design, implementation, and school policy decisions, then teachers will possess the authority to develop and implement solutions to the challenges they face. When teachers are handed curriculum or told how to solve their problems, they come to believe that the expertise to solve their problems lies outside the school. They search for the right workshop, the most popular guru, or a one-size-fits-all solution. They come to believe that they lack the necessary abilities to face their challenges and achieve their goals without outside intervention.

There is a connection between how a school or school district treats its teachers and how those teachers treat their students. If we expect students to become articulate, creative, problem-solvers who are active participants in their learning and who are able to apply what they've learned to new situations, then we must foster those behaviors in our teachers. If we hold our teachers to high standards, we must provide a professional development program that encourages active learning, problem-solving, and self-reflection. We must provide a professional development program that models the behaviors we expect our teachers to model in the classroom.

Posted on The Knowledge Loom along with other expert opinions on teacher development: http://knowledgeloom.org/pd.

Research Review:
What is a Teacher Community?

“What makes a teacher community different from a gathering of teachers?” ask researchers Pamela Grossman, Sam Wineburg, and Stephen Woolworth in a recent paper. Studying their own work with a teacher “book club” in an urban high school, the researchers chart the developmental struggles and successes of their teacher community. They describe how their group moved through a long stage of “pseudo-community” where the teachers covered up meaningful conflicts to a stage where they viewed their differences as “essential tensions.” Differences in educational philosophy, subject matter training, and communication strategies surfaced as the group shifted from a “group of teachers sitting in a room” to a teacher community. The authors then explore the value of a teacher community, citing intellectual renewal, shared knowledge growth, leadership development, and role modeling for students as particular benefits. The report offers a realistic portrayal of both the challenges and rewards of evolving into an effective teacher community, an important aspect of teacher development.

Resources:
The report can be accessed online at the Center for the Study of Teaching and Policy at
https://dept.washington.edu/cpmail/publist.htm
The Center is a resource for many useful articles on teacher development, from teacher preparation research to state and district policy analyses.
References


Selected Education Alliance Programs with Information and Services for Teachers:

Master's Program for Teachers

Promoting bilingual education/ESL and Cross-cultural studies

The Education Alliance and the Brown University Department of Portuguese & Brazilian Studies jointly offer two advanced degrees for candidates with a Bachelor's Degree and a teaching certificate:

- English as a Second Language and Cross-cultural Studies
- Portuguese Bilingual Education and Cross-cultural Studies

For more information, call us at 401-274-9548. To obtain an application, write to Brown University, Graduate School, Box 1867, Providence, RI 02912.

The New England Equity Assistance Center

Ensuring equal access to educational programs

The New England Equity Assistance Center assists school districts in solving equity problems in education and offers training and workshops for teachers, among other programs. For more information on the Center, visit:

http://www.alliance.brown.edu/eac/index.shtml

The Development and Dissemination Initiative

Developing, discovering and sharing exemplary practices

Working in New York City Schools, the Initiative strengthens programs and services for English Language Learners (ELLs) that lead to high student achievement. For more information on exemplary teaching practices within those schools, visit:

http://www.alliance.brown.edu/dnd/
The LAB, a program of The Education Alliance at Brown University, is one of ten educational laboratories funded by the U.S. Department of Education's Office of Educational Research and Improvement. Our goals are to improve teaching and learning, advance school improvement, build capacity for reform, and develop strategic alliances with key members of the region's education and policymaking community.

The LAB develops educational products and services for school administrators, policymakers, teachers, and parents in New England, New York, Puerto Rico, and the Virgin Islands. Central to our efforts is a commitment to equity and excellence. Information about LAB programs and services is available by contacting:

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