Policy Brief

Teaching Quality – Professional Development

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Improving the Skills and Knowledge of the High School Teachers We Already Have

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Nearly 1 million high school teachers (grades 9-12) currently work in schools across this country.[1] And the research is clear — teacher quality is critical to student achievement. Yet while numerous state efforts seek to recruit, train and retain more teachers, fewer initiatives focus on developing teachers, particularly high school teachers, once they enter the classroom. This policy brief examines seven high-leverage components to strengthen teacher professional development at the high school level and provides state policy suggestions for each:

- Deepening conceptual knowledge
- Integrating college and workforce readiness into teacher expectations and instruction
- Developing communities of practice and mentorship supports
- Using data, school- and classroom-level assessment practices and differentiated instruction
- Keeping a focus on instruction
- Addressing organizational professional development
- Using technology to leverage learning.

Deepening conceptual knowledge

As Neelam Khan, William Schmidt and their co-authors note in a 2007 report, "Some research … indicates that few professional development programs are content driven (Kennedy 1998)."[2] However, research and practice point to a few options that provide the conceptual knowledge teachers need to be able to convey subject content to their students. State support for professional development delivered through externship experiences is one means to deepen teacher content expertise.

Another approach is to provide school-based programs that offer teachers opportunities to deepen their own understanding of content, such as mathematical or scientific ideas. Such school-based efforts provide training and coaching that focus on and delve deeply into the competencies and practices that most impact instruction and student learning. In other words, these programs deliver professional learning not as a one-time event, but as sustained job-embedded learning.

Externships

Why it's a good idea: Real-world knowledge and tools — particularly in science and technology — are changing at a rapid pace. Externships provide an opportunity for teachers to keep abreast of these changes, so that they may pass them along to their students. And just like students, teachers need answers to the question, "Why do we need to learn this?" Teachers who have worked only within the field of education can benefit, for example, from first-hand awareness of the changing workplace competencies, skills, and attitudes that students will need to be successful, and from a deeper understanding of how students will be expected to apply classroom learning to real world situations. Their students can likewise benefit from teachers' ability to bring knowledge of the business world into the classroom.

State policy could:

Support externships by providing funding or incentives for initiatives that meet state-set specifications. While many externship programs appear to be local school-business agreements, **Connecticut** has passed legislation to create a "Generation Next" pilot program that provides industry-based job shadowing and internship experiences to public school teachers, including those in regional vocational-technical schools. The Commissioner of Education is authorized to award grants to local boards, regional vocational-technical schools, or state-wide or local business associations, in partnership with such boards of education or schools, for demonstration projects. Externships must be with science or math or technology-intensive businesses.[3]

Alternatively, **Indiana** provides tax credits to businesses that employ teachers in shortage areas (including math and science) during the summer months. Summer jobs must be relevant to the teacher's academic training in a shortage area and use skills and expertise developed through their academic training and/or teaching experience.[4]

Alternative approaches to deepen content knowledge and methodology

Why it's a good idea: In the "MT21" report, William Schmidt and colleagues compared the preservice requirements of middle grades mathematics teachers in the U.S. against those in Taiwan, South Korea, Bulgaria, Germany and Mexico. They found that Taiwanese and Korean mathematics teacher candidates undergo "more demanding and extensive" content and pedagogical preparation than their U.S. counterparts, while the "U.S. is best characterized as having little opportunity for mathematics content and modest opportunities in practical pedagogy."[5]

University of Wisconsin-Madison education researchers have proposed that to promote learning with understanding, mathematics and science teachers need to have the tools to help students:

1. Connect new knowledge to what they already know
2. Construct a coherent structure for the new knowledge
3. Engage in inquiry and problem solving
4. Take responsibility for validating their ideas and procedures.

This kind of teaching requires that teachers have a coherent vision of:

1. The structure of the mathematical or scientific ideas and practices they are teaching
2. The conceptions, misconceptions, and problem-solving strategies students are likely to bring to the classroom and the areas in which students are likely to have difficulty
3. The learning trajectories students are likely to follow
4. The tasks and tools that can provide windows into students' thinking and support their learning and problem solving
5. The kinds of scaffolding that can support students' efforts to engage in sense making and problem solving
6. The class norms and activity structures that support learning.

The researchers found that these types of capacities "cannot be embedded in curriculum materials or scripted into instructional routines. Teachers need flexible knowledge that they can adapt to their students and the demands of situations that arise in their classes. **Acquiring this kind of knowledge requires new conceptions of professional development."** (emphasis added)[6] Such new conceptions of professional development can be provided on-site on an ongoing basis, so that teachers do not have to seek them out.

State policy could:

Provide support for programs based on new conceptions of professional development. For example, **Kentucky** S.B. 2 (2008) calls for the creation of a STEM Initiative Task Force responsible for creating a comprehensive statewide strategic plan. The plan must include, among a number of elements, developing STEM mentoring programs that partner grades 5-12 teachers, their students, or both, with engineers, business professionals, college or university professors, university students, or others with expertise in the STEM disciplines. Programs must link academic coursework with the real world, underscoring the importance of rigorous academic preparation and encouraging pursuit of careers in the STEM disciplines. The bill directs the task force to develop a business plan, aligned with the strategic

plan, that includes measurable benchmarks for progress in achieving the goals in the strategic plan in years one, three and five.

Since 2007, state law in **Minnesota** has required teacher centers to train interested and highly qualified secondary teachers to assist other inservice teachers with mathematics and science curriculum, standards and instruction so that all teachers have access to: (1) high quality professional development programs in mathematics and science that address curriculum, instructional methods, alignment of standards, and performance measurements; enhance teacher and student learning; and support state mathematics and (2) research-based mathematics and science programs and instructional models premised on best practices that inspire teachers and students and have practical classroom application.[7]

Integrating college and workforce readiness into expectations and instruction

Why it's a good idea: In his 2007 report, *Toward a More Comprehensive Conception of College Readiness*, David Conley suggests that "college readiness" encompasses academic knowledge and skills, as well as "key cognitive strategies" such as study skills and self-monitoring. Conley proposes teacher professional development as key to incorporating this college readiness into high school instruction:

> To teach an intellectually challenging class, teachers must be properly prepared and equipped with the understandings of their subject area necessary to evoke in students the desired responses to material, responses designed to deepen their engagement with and understanding of key course concepts and to expand their repertoire of thinking skills and strategies. Teachers must have a reference point for college readiness that extends beyond their own previous experiences in college or self reports from the few students who return to share their post-high school experiences in college.
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> The necessary support ideally takes the form of professional development activities in which teachers learn to focus their curricula on key ideas and supporting concepts and to teach these through techniques, activities, and assignments that require students to develop the key cognitive strategies necessary for college success. Such activities are often best undertaken in partnership with colleagues from postsecondary institutions. They can include seminars on recent developments in the academic field, debate and discussions of controversial ideas in the subject area, critiques of potential student assignments, and reviews of student writing and a consideration of strategies to improve writing.[8]

However, research suggests that few teachers have the "college knowledge" students need. Studies such as the ACT National Curriculum Survey 2005-2006 (published in 2007) make clear the disconnect between the skills and knowledge prioritized by secondary-level teachers, and the student expectations held by postsecondary instructors of remedial and entry-level, credit-bearing college courses. Research also indicates that high school teachers are largely unaware of the content (or existence) of the college placement exams that determine which college freshmen must spend precious time and tuition dollars on non-credit-bearing remedial classes.

Surveys conducted by Stanford University's Bridge Project also found that students were more likely to ask their teachers than school counselors for information about applying for college. Yet college application requirements and procedures are constantly changing, and few (if any) inservice programs adequately prepare teachers to answer these questions.

Furthermore, teachers themselves can serve as arbiters of which students receive clear messages and which does not. Students in non-honors track courses report receiving less information about college from their teachers than do honors-track students.

Students who are not planning to attend college also need answers to their questions about options open to them after high school, and teachers who have an in-depth understanding of technical and high-skills fields are more likely to effectively answer those questions. What level of math, for example, do you need to become a machinist? An electrician? And what does that mean for student course-taking in high school?

State policy could:

Ensure that teachers are equipped to answer students' questions about college admissions and high-skills careers. The 2007 ECS policy brief "Helping Equip Teachers to Answer Students' Questions on College Knowledge," provides several state policy approaches, including encouraging districts to offer teacher professional development programs on college knowledge and career guidance.

Provide support for professional development that deepens teachers' understanding of alignment (or lack of alignment) between K-12 and postsecondary standards. This might emerge from activities such as regular engagement in vertical teams of teachers and faculty (community college, four-year and technical school) who discuss alignment of expectations and curriculum in their content areas. **Texas** legislation and rules, for example, call for the creation of four vertical teams of K-12 educators and postsecondary faculty, one each in English/language arts, mathematics, science and social studies. Among their many tasks, such discipline-based teams must develop instructional strategies for teaching courses to prepare students to successfully perform college-level coursework, and develop minimum standards for curricula, professional development materials and online support materials designed for students who need extra help in preparing for college-level coursework. By June 2009, the English language arts team must develop and English language arts curricula and materials, to be approved by the state board for use starting in fall 2009. The other vertical teams must develop similar materials for math, science and social studies, each subsequent fall semester, with the last of the curricula standards and materials developed by September 2011.[9]

Developing communities of practice and mentorship supports

Communities of Practice

Why it's a good idea: Where there are "communities of practice," teachers talk about practice, share knowledge and reflect on their roles in instruction and student learning. They work to achieve common school and district goals. They understand that problems are best solved not in isolation, but together. They continuously improve their knowledge and practice.

State policy could:

Encourage and support practice whereby school and district staff leaders learn from one another to further research and understanding about effective school culture and instruction. For example, 2007 legislation directs the **Iowa** Department of Education, in collaboration with local districts, to establish teacher development academies for school-based teams of teachers and administrators. Each academy must include an institute and provide follow-up training and coaching. The legislature appropriated up to $1,845,000 in the 2007 fiscal year to support the establishment of these academies. In addition, state law allows districts to apply to participate in the student achievement and teacher quality program. Applicant districts must create teacher quality committees that:

(1) Monitor the implementation of the requirements of the student achievement and teacher quality program
(2) Monitor the evaluation requirements of the program to ensure fairness and consistency throughout the district, and develop model evidence for the Iowa teaching standards and criteria
(3) Determine the use and distribution of the professional development funds distributed to the district
(4) Monitor the professional development in each school to ensure that district, school and individual professional development plans are being met
(5) Ensure a negotiated agreement determines the compensation owed teachers on the committee for work responsibilities required beyond the normal school day.[10]

Michigan's School Improvement Framework Rubrics provide clear benchmarks for instruction, review and implementation of curriculum, assessment, etc. These tools can be used at either the building or district level to help staff improve student learning, and are available online. Under the standard for "Meeting Student Needs," for example, one exemplary practice is described as "Analyses of district/building assessments are systematically and routinely used by teacher teams to identify and provide interventions for students who are not mastering benchmarks." Under "Knowledge of Adult Learning," two measures of exemplary practice include: "School leaders have designed structures to assure the successful transfer of learning into practice including opportunities to receive feedback on

teaching strategies, observe exemplary practices and reflect on practice" and "School leaders have instituted professional learning communities throughout the school and have provided common time during the contracted school day for the teams to meet."[11]

The **Illinois** New Teacher Collaborative launched a network, INTC Online, in 2006. To date, this type of online networking opportunity has emerged from local efforts; however, this should not discourage states that recognize the value of professional networks from taking the lead in establishing such networks statewide.

Mentorship and induction supports

Why it's a good idea: One of the reasons new teachers most commonly cite for leaving the profession is a lack of support. Teachers who did not undergo an induction program are twice as likely to leave the profession during their first three years. Induction not only increases retention, but allows teachers to focus on instruction rather than classroom management issues.[12] However, the old mentoring and induction model that leaned toward creating "mini-me's" has lacked results. Selection of top-quality mentors is also key to successful programs.

State policy could:

Establish expectations for quality induction and mentorship programs. What comprises a model mentorship program? The paper "Key Components of a New Teacher Induction and Mentoring Program," based on a literature review and the experience of six Wyoming district induction and mentoring programs, suggests the following elements:

- **Program planning** that includes "a clear vision; commitment to mentoring; a planning and decision making process; and guidelines, policies, and procedures" as well as "clearly defined goals, purposes, roles, and responsibilities for all participants; supportive leadership; and [adequate staffing]."
- **Funding** to support districts, particularly rural districts, in developing, implementing and maintaining programs. Funds should provide salary supplements to mentors to reflect their additional duties and responsibilities.
- **Clearly defined mentor roles and responsibilities** of mentor teachers, e.g., modeling lessons; observing and coaching; modeling the use of technology to enhance instruction; analyzing assessment, curriculum, and instructional planning; gathering resources; guiding teachers to implement effective behavior management strategies; enhancing teacher understanding of data analysis.
- **Mentor training** that includes, for example, effective lesson planning; aligning assessment and curriculum; analyzing student work; collecting and analyzing classroom data; effective classroom strategies and behavior management practices.
- **Clearly defined mentee roles, responsibilities and training** such as training in "learning routines and procedures; lesson planning; classroom management" and discipline, assessing student performance; understanding state and district standards; communicating with and involving parents; time management; etc.
- **Clearly defined administrator roles and responsibilities** that identify "specific ways a principal can support induction and mentoring of new teachers." For example, principals could "take the lead in developing a formal program, commit to funding programs," stop assigning new teachers the most challenging classes, "match teacher caseloads to the level which they student taught," etc.
- **Evaluation** that could include "reflective journals; interviews; focus groups; portfolios; individual learning plans; written narratives; surveys; new teachers retention rates; and student assessment."[13]

To help recruit mentors, states such as **Delaware** allow retired educators serving as mentors to receive a stipend without negatively impacting their retirement benefits.[14]

The **Alaska** Statewide Mentor Project (ASMP) is researched-based and modeled after the nationally renowned program developed by the New Teacher Center at the University of California, Santa Cruz. The ASMP model includes:

- "Rigorous mentor selection
- Full release of master classroom teachers so they can mentor full-time and participate in professional development for mentors" continuously throughout the school year
- "Structured face-to-face teacher/mentor interaction at least monthly with weekly follow-up e-mail and/or phone meetings
- Documentation of specific instructional goals for teachers
- Ongoing mentoring for the first two years of teaching"
- Coaching for principals to help them become successful instructional leaders — by acquiring and demonstrating the professional skills necessary to create a culture that encourages and promotes effective teaching and ongoing learning by all students. [15]

Using data, school- and classroom-level assessment practices and differentiated instruction

Using data

Why it's a good idea: The National Staff Development Council's Standards for Staff Development encourage educators to apply "disaggregated student data to determine adult learning priorities" and to use "multiple sources of information to guide improvement and demonstrate its impact."[16]

A critical and formative aspect of a professional development model is an embedded process of 1) continuously collecting systematic data related to the impact of staff development on classroom practices, 2) analyzing and interpreting these data, and 3) using all the collected data to adjust professional development training and support to more closely meet the learning and classroom-application needs of teachers and school leaders.

Assessment-related professional development targets teacher and administrator understanding of formative assessment and use of data to improve student learning.

State policy could:

Require ongoing professional development on how to evaluate and use data to improve instruction. Florida requires all districts to develop professional development systems based on analyses of student achievement data. In developing and refining their systems, districts and schools must also review and monitor other data, including:

- School discipline data
- School environment surveys
- Assessments of parental satisfaction
- Performance appraisal data of teachers, managers, and administrative personnel
- Other performance indicators to identify school and student needs that can be met by improved professional performance.[17]

Differentiated instruction

Why it's a good idea: The University of Wisconsin, Wisconsin Center for Education Research study mentioned previously ("Scaling Up Innovative Practices in Math and Science") denotes the deeper knowledge that teachers need to most effectively help students learn. Differentiated instruction is important because it recognizes that students learn differently — consequently, teachers need to be able to address students' needs using varied approaches.

State policy could:

Emphasize new conceptions of professional development. For example, funding leadership training that replicates successful programs (e.g., Alaska's Administrative Coaching Program) helps principals become successful leaders who understand and use a variety of evidence of what their students know and can do (i.e., data) to improve teaching and learning. Through such training, principals acquire and are able to demonstrate the professional skills necessary to create a school culture that encourages and promotes effective teaching by all teachers and ongoing learning by all students.

Implement sustainable and replicable models of professional development and evaluate the implementation of such programs. States might require program evaluation as a condition of receiving professional development grants or other funding and require programs to show results prior to being refunded.

Ensure that policy specifically designates differentiated instruction as a key component of professional development programs — and that priority for implementation targets the neediest schools. A **California** bill enacted in 2008 addresses both use of data — and professional development — in differentiating instruction. The legislation authorizes a teacher participating in the Mathematics and Reading Professional Development Program to complete up to 40 of the 80 hours of required follow-up training in:

(1) Data analysis
(2) Alignment of assessment and instruction
(3) Implication of data analysis and its effect on increasing pupil achievement
(4) Impact on pupil success through diagnostic teaching
(5) Differentiating instruction through pacing and complexity
(6) Grouping as an aid to instruction
(7) Statewide and local data management systems.[18]

In **Florida**, the school improvement plan of every building that earns a "C" or lower, or that is designated as in need of improvement under the No Child Left Behind Act, must incorporate specific components, including professional development. The plan must include professional development that supports enhanced and differentiated instructional strategies to improve teaching and learning, and continuous use of disaggregated student achievement data to determine effectiveness of instructional strategies.[19]

Keeping a focus on instruction

Why it's a good idea: A 2005 study of the Virginia turnaround specialist program found that the turnaround principals typically encountered four primary "predictable predicaments" and a larger number of secondary conditions that influenced these four problems. The big four were: (1) Reading problems, (2) Math problems, (3) Attendance problems and (4) Discipline problems.

The secondary conditions included personnel problems, lack of focus, unaligned curriculum, ineffective scheduling, data deprivation, lack of teamwork, inadequate infrastructure, dysfunctional school culture, lack of effective instructional interventions, lack of inclusion of special education students, lack of specialists, low parent involvement, negative perceptions of school, inadequate facilities, inadequate instructional materials and central office instability.[20]

What might this look like?

State leaders can provide a list of anticipated problems — and match professional development or resources to them. They should broadly disseminate best practices that have addressed common difficulties. Conversely, they could help identify what has not had a positive effect on addressing common problems.

State policy can also support development initiatives related to Response to Intervention (RtI). The National Association of State Directors of Special Education defines RtI as the practice of (1) providing high-quality instruction/intervention matched to student needs and (2) using learning rates over time and level of performance to (3) make important educational decisions. While initially geared toward students with special needs, general educators are increasingly applying RtI to provide increasingly intense, multi-tiered interventions.[21] Successful use of this approach, however, is more likely if ongoing training and evaluation supports its implementation.

Organizational professional development

Why it's a good idea: Professional development is typically a learning opportunity for staff, but on a larger scale, it can also benefit school and district leadership. When school or district leaders work to develop school improvement plans, for example, they often require a deeper understanding of what

needs to be done differently. Supporting the development of school and district leadership can improve school and district improvement plans, which ultimately benefit student achievement.

State policy could: Support and disseminate information on collaborative, organization-wide efforts for districts and agencies to become "learning organizations," and embed evaluation as a component of these efforts.

In **Florida**, one section of the School Community Professional Development Act (2006) requires the department of education, public postsecondary institutions, school districts, public schools, state education foundations, consortia and professional organizations to work collaboratively. It also requires the system of professional development to align to the standards adopted by the state and support the framework for standards adopted by the National Staff Development Council.

The department is required to disseminate research-based professional development methods and programs that have demonstrated success in meeting identified student needs. The methods of dissemination must include a Web-based statewide performance support system that contains a database of exemplary professional development activities, a listing of available professional development resources, training programs and available assistance.

The professional development system also must include a master plan for in-service activities for all district employees from all fund sources. The master plan must be based on input from teachers and district and school instructional leaders, and must use the latest available student achievement data and research to enhance rigor and relevance in the classroom.[22]

Michigan's School Improvement Framework Rubrics (described previously) are one means of providing professional development on a school- or district-wide basis. In "Complexity, Accountability, and School Improvement," Jennifer O'Day recommends fostering connections "within and across units to allow access to and reflection on information relevant to teaching and learning."[23]

Using technology to leverage adult learning

Why it's a good idea: Technology allows anytime, anywhere access to resources.

State policy could: Provide means of **electronic conferencing and other electronic tools** (videos, etc.) for more efficient professional development.

The **New Hampshire** Learning Interchange (NHLI) was developed as a means of preparing teachers and providing professional development at the local level and across the state. NHLI provides an online showcase of promising educational practices occurring within the state. Submissions are vetted through a rubric, but once selected, are available online.

The latest **South Carolina** report, "What is the Penny Buying for South Carolina?" recommends that the department consider using Web-based seminars, podcasts, etc. as a substitute for on-site meetings and seminars.

Arkansas legislation passed in 2005 established the Online Professional Development Initiative. State policy requires online professional development courses to be aligned with focus areas identified by the state board, with state curriculum frameworks and content standards, and with the Southern Regional Education Board Multi-State Online Professional Development Standards. In 2006, the Arkansas Educational Television Network made a new portal available to every school and teacher in the state: the Arkansas Internet Delivered Education for Arkansas Schools (IDEAS). Resources offered include, among others: Teacherline, video streaming, and the ability to communicate online with other educators (http://ideas.aetn.org/).

Conclusion

While state policymakers have leveraged substantial resources in recent years to draw more and higher-qualified individuals to teaching careers, relatively few systemic efforts have been leveraged to maintain and improve upon the knowledge and skills of adults once they enter the classroom. The policy

approaches set forth in this paper can help ensure that teachers continuously improve their performance, so as to support continuous student growth.

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[1] Digest of Education Statistics 2007, National Center for Education Statistics, U.S. Department of Education 2008.
[2] Neelam Kher, William H. Schmidt, Richard T. Houang, Zhiwen Zou, *High School Mathematics Trajectories: Connecting Opportunities to Learn with Student Performance.* [report online] (East Lansing: Michigan State University, 2007, accessed 28 July 2008); available from MSU: http://hub.mspnet.org/media/data/PROMSE_Aera_2007_Paper.pdf?media_000000002418.pdf; Internet.
[3] CONN. GEN. STAT. § 10-21G
[4] IND. CODE ANN. § 6-3.1-2-1 through -7; IND. ADMIN. CODE tit. 511, r. 1-2-1 through -3
[5] William H. Schmidt, Maria Teresa Tatto, Kiril Bankov, Sigrid Blömeke, Tenoch Cedillo, Leland Cogan, Shin Il Han, Richard Houang, Feng Jui Hsieh, Lynn Paine, Marcella Santillan and John Schwille, *The Preparation Gap: Teacher Education for Middle School Mathematics in Six Countries (MT21 Report).* [report online] (East Lansing: Center for Research in Mathematics and Science Education, Michigan State University, 2007, accessed 28 August 2008); available from the Center for Research in Mathematics and Science Education: http://usteds.msu.edu/MT21Report.pdf; Internet.
[6] Wisconsin Center for Education Research, "Scaling Up Innovative Practices in Math and Science," *WCER Research Highlights* Vol. 16, no. 2, (Summer 2004): 4-5. http://www.wcer.wisc.edu/Publications/highlights/v16n2.pdf
[7] Sec. 14. Minnesota Statutes, section 122A.72, subdivision 5
[8] David T. Conley, *Toward a More Comprehensive Conception of College Readiness.* [report online] (Eugene: Educational Policy Improvement Center, 2007, accessed 14 August 2008); available from EPIC: http://www.s4s.org/upload/Gates-College%20Readiness.pdf; Internet.
[9] TEXAS EDUC. CODE ANN. § 28.008; 19 TEX. ADMIN. CODE § 4.171 through 4.176, 74.1001
[10] IOWA CODE ANN. § 284.6(10), 284.13(1)(e), 284.4(1)(C)
[11] Michigan Department of Education, "Michigan School Improvement Framework Rubrics," accessed 28 August 2008; available from: http://www.michigan.gov/documents/OSI_FW_Rubrics_v_157013_7.3.pdf
[12] American Federation of Teachers, *Beginning Teacher Induction: The Essential Bridge.* [report online] (Washington, D.C.: American Federation of Teachers, 2001, accessed 14 August 2008); available from AFT: http://www.aft.org/pubs-reports/downloads/teachers/policy13.pdf; Internet.
[13] Robin Dexter, William Berube, Alan Moore, University of Wyoming; Mike Klopfenstein, Laramie County School District #1, Cheyenne, Wyoming , *Key Components of a New Teacher Induction and Mentoring Program.* [report online] (The Mentoring Leadership & Resource Network, n.d., accessed 14 August 2008); available from MLRN: http://www.mentors.net/03library/keycomps.html; Internet.
[14] DEL. CODE ANN. TIT. 14, § 1305(q)
[15] Alaska Department of Education and Early Development, "Alaska Statewide Mentor Project," accessed 28 August 2008; available from: http://www.eed.state.ak.us/State_Board/pdf/Alaska_Statewide_Mentoring_Project.pdf
[16] National Staff Development Council, "NSDC's Standards for Staff Development" (revised 2001), accessed 28 August 2008; available from: http://www.nsdc.org/standards/index.cfm
[17] FLA. STAT. ANN. § 1012.98(4)(b)(2)
[18] CAL. EDUC. CODE § 99237.6
[19] FLA. STAT. ANN. § 1001.42
[20] Daniel L. Duke, Pamela D. Tucker, Melva Belcher, Deloris Crews, J. Harrison-Coleman, Jennifer Higgins, Lesley Lanphear, Melissa Marshall, Harry Reasor, Sharon Richardson, Mel Rose, Michael J.

Salmonowicz, Wayne Scott, Rosalind Taylor, Catherine Thomas, and June West, *Lift-Off: Launching the School Turnaround Process in 10 Virginia Schools.* [report online] (Charlottesville: Darden/Curry Partnership for Leaders in Education, University of Virginia, 2005, accessed 14 August 2008); available from UVA: http://www.darden.virginia.edu/uploadedFiles/Centers_of_Excellence/PLE/VSTPS-Final.pdf; Internet.

[21] National Association of State Directors of Special Education, Council of Administrators of Special Education, Response to Intervention NASDSE and CASE White Paper on RtI accessed 24 September 2008; available from http://www.nasdse.org/Portals/0/Documents/Download%20Publications/RtIAnAdministratorsPerspective1-06.pdf

[22] FLA. STAT. ANN. § 1012.98

[23] Jennifer O'Day, "Complexity, Accountability, and School Improvement," *Harvard Educational Review* Vol. 72, no. 3, (Fall 2002): 293-329. http://www.politicalscience.uncc.edu/godwink/PPOL8687/Wk10%20March%2022%20Accountability/Oday%20Accountability%20and%20Testing.pdf