

Connecticut

Preparing Teachers for a New Era

What will it take to prepare a new generation of teachers who are able to work successfully with an increasingly diverse student population and help their students achieve new rigorous learning goals? What are the key features of teacher education programs that can provide the public schools with such teachers? And what are the implications of our best answers to these questions for state policy? For state policymakers, university leaders, and district officials charged with ensuring that all children are taught by highly qualified teachers, it is imperative to answer these questions about teacher quality. Finding the answers and acting on them require the commitment, collaboration, and coordination of a number of public and private institutions and agencies, and of multiple levels of government. Access to a high-quality teacher education program can affect teachers' productivity, the longevity of their careers, and the quality of the learning opportunities provided for their students.

Through its Teachers for a New Era (TNE) initiative, Carnegie Corporation of New York, with support from the Annenberg and Ford Foundations, is stimulating a thoughtful search for answers by supporting ambitious reforms in selected teacher education programs across the country. Drawing on the wisdom of national professional organizations, reform commissions, and the research community,

2003–2004 Snapshot

Approved Teacher Preparation Programs:	17
Initial Teacher Certificates Issued by the State:	3,503
K–12 Public School Teachers:	50,310

Carnegie is challenging these institutions to develop exemplary teacher preparation programs based on three design principles:

1. **Decisions Driven by Evidence.** The new teacher education programs would be guided by a culture of evidence. Program content and pedagogical practice would be based on credible evidence drawn from research literature and from the experience of their students. Program effectiveness would be determined by the impact of their graduates on student achievement, and these data would drive the continuous improvement of their programs.

2. **Effective Engagement of Arts and Sciences Faculties.** The education of prospective teachers would include the full engagement of faculty members in the disciplines of the arts and sciences to ensure teachers obtained the depth of subject-matter understanding and pedagogical content knowledge needed to understand and address students' learning needs. Arts and sciences faculties would collaborate with teacher educators to ensure that prospective teachers were well prepared to teach the curricula of the public schools served by the institution.

3. **Emphasis on Teaching as a Clinical Practice Profession.** Teacher education would integrate academically rigorous experiences with immersion in clinical practice. This would entail close cooperation between colleges of education and K–12 schools, use of exemplary K–12 teachers as clinical faculty

appointed to the college of education, and support for residency programs for beginning teachers over a two-year period of induction.

With support from Carnegie, 11 institutions in 10 states are redesigning their teacher preparation programs according to these three design principles. They are critically reconsidering their use of the knowledge base, their collection and use of evidence, their curriculum and standards, and their school-based relationships in order to produce higher-quality teacher candidates. It is hoped that the accomplishments of these institutions will offer interested policymakers, university leaders, and state education officials blueprints and tools to help them develop improved teacher preparation programs. Such programs will be capable of producing the teachers we need to raise the performance of the public schools and close the achievement gaps that perpetuate social inequities.

Clearly, states have an important role to play in this work. Through leadership, policymaking, resource allocations, and oversight, state governments shape the environments in which public and private teacher preparation programs operate. They can encourage and support efforts by these programs to restructure so as to foster a culture of evidence, engage arts and sciences faculties, and provide prospective teachers with the rich and sustained clinical experiences and support they need.

For each of the 10 states in which TNE institutions operate, CPRE has developed a policy profile that explores the interaction of state policies and programs with the core ideas and practices associated with Carnegie's three design principles. For each state, we first provide a brief description of how the TNE institution is acting on the three design principles. Then we describe the current policy context for teacher preparation and the state

role and policy strategies for improving and ensuring teacher quality. Next we explore specific policies and programs in the state related to the three design principles to identify those that are supportive, those that may need strengthening, and those that need reconsideration by policymakers, state department officials, and teacher preparation institutions. This profile focuses on Connecticut, and where appropriate we offer concrete examples from the restructuring now under way at the University of Connecticut (UConn), one of the 11 institutions to receive a TNE grant.

The University of Connecticut

UConn is the sixth-largest producer of teacher candidates in the state, graduating over 175 teachers each year. The Neag School of Education (NSOE) at UConn prepares teachers through its unique five-year Integrated Bachelor's and Master's (IB/M) program and a four-semester master's certification program.

In 2003, UConn received a \$5 million challenge grant from Carnegie Corporation's TNE initiative. TNE at UConn initially is focusing on the preparation and induction of prospective middle school teachers (grades 5–8). The reforms are organized around the three design principles. One strand of work focuses on the use of evidence to inform teacher preparation. An assessment team, composed of faculty from the College of Liberal Arts and Sciences (CLAS) and NSOE, is developing a comprehensive assessment process. The team will develop indicators to track student achievement and teacher performance post-graduation through NSOE's electronic portfolio system. A second strand focuses on the involvement of arts and sciences faculties to ensure that teacher candidates develop adequate content knowledge. A curriculum design team is developing expectations for teacher candidates to guide a review of both

CLAS content and general knowledge courses and NSOE clinical experience and pedagogical courses. This team is composed of faculty from both CLAS and NSOE who meet as subject-specialty teams in math, foreign languages, science, language arts, and social studies. A third strand focuses on strengthening current partnerships with local professional development schools and developing a new clinical residency program that builds on the state's induction program and integrates with district mentoring programs. The clinical component will also develop a cadre of teachers who can serve as appointed clinical faculty at UConn.

Education Policy Context

Governance Landscape. Responsibility for teacher preparation is distributed across two state agencies and their respective governing boards: the Connecticut State Department of Education (CSDE) and the Connecticut State Department of Higher Education (CSDHE).

An appointed State Board of Education (SBE) selects the commissioner of education and has primary policymaking authority for teacher preparation and teacher quality. Through its Bureau of Educator Preparation, Certification, Support and Assessment, the CSDE accredits teacher preparation programs, oversees teacher certification, and manages the state's induction program for beginning teachers.

The CSDHE's responsibilities for teacher quality are subsumed within its larger role as Connecticut's higher education coordinating agency. In terms of teacher preparation, the agency is responsible for the state's Alternate Routes to Teacher Certification (ARC) program, which is closely coordinated with the CSDE. Overseeing the CSDHE is the commissioner of higher education, who is selected by an appointed Board of Governors.

The commissioner for higher education serves as an ex officio nonvoting member of the SBE. Longtime state administrators, university leaders, and teacher education faculty all characterize the state-level policy dialogue around school reform as generally positive and "bipartisan" in nature. Policymaking around teacher preparation is considered "reform-minded," "supportive," and "unified around teacher quality."

Until recently, Connecticut has taken a low-stakes approach to accountability with both its K-12 schools and teacher preparation programs, choosing to stimulate change through increased awareness and targeting of resources. "In Connecticut, mandates are used very sparingly," one state official explained. "We try to use incentives rather than sanctions to get people to try to change policies." New federal mandates under No Child Left Behind (NCLB) are challenging this strategy with K-12 schools, according to state officials.

Contributing to this policy climate are widely held beliefs that Connecticut's university system has served the state well and that Connecticut residents are generally concerned about education. "Overall there is no pointing of fingers in Connecticut around educational failure or success," explained one university administrator. "There is recognition that the problems facing public schools are complicated and require coordination and commitment from all stakeholders." Although state budget shortfalls have strained resources, K-12 and higher education have been spared dramatic cuts. More recently, however, federal resources show signs of declining and are projected to fall again in the near future.

Teacher Preparation. In Connecticut, 16 universities and colleges are authorized by the SBE to operate teacher preparation programs. The CSDHE's ARC Program is also approved by the SBE. Of the 3,503 initial teacher

licenses issued in 2003–2004 by the CSDE, about 70% were prepared by Connecticut public and private universities and colleges. Connecticut’s high teacher salaries, support for beginning teachers, and reputation for a highly professional teacher workforce, characterized as “well trained” and “resourceful,” are considered key competitive features. The education department reports a high teacher retention rate over the past decade except in urban areas; several studies on this issue are under way.

An ongoing issue for policymakers is the adequacy of the supply of K-12 teachers in the state. Both the CSDE and CSDHE monitor the teacher shortage through annual teacher graduate and hiring reports. As with other states, areas of need include mathematics, science, special education, and world languages. Teacher shortages are a particular problem at the secondary school level and in urban and rural districts. A 2000 state study of teacher supply and demand estimated that more than 40% of Connecticut teachers will retire over the next decade, further straining the state’s current pipeline for new teachers.

Connecticut lawmakers and state officials are considering an array of incentive programs to address teacher shortage areas. The ARC program administered by the CSDHE aims to attract mid-career professionals to teaching. The program’s specific subject and grade levels vary in response to shortage areas. Since its founding in 1986, the ARC program has prepared more than 3,000 teachers. More recent strategies have focused on expanding the capacity of traditional pathways to teaching. Some believe that qualified undergraduates have been turned away from teaching because of institutional enrollment caps and extra admissions requirements at the teacher preparation program level. Facing strong pressures to expand enrollment in current programs, university administrators see

some possibilities but also express concerns about whether program quality can be sustained. Other potential solutions include the development of stronger articulation agreements between two-year community colleges and four-year institutions to attract more nontraditional teacher candidates.

State Role in Teacher Preparation

Key state policies for teacher preparation in Connecticut establish high hurdles for entering the education profession and a system of supports for beginning teachers. The current “state vision” for teacher quality has its roots in the landmark 1986 Education Enhancement Act, which raised standards for teacher education and certification, created supports and assessments for beginning teachers, and increased teacher salaries to levels competitive with other states. According to state officials, many key components have been updated and expanded in the past 10 years, representing a “second generation” of teacher preparation policies.

The sustained focus on teacher quality over the past 20 years and the comprehensive nature of the state teacher preparation system have facilitated good working relationships among key stakeholder groups. “Because the state has been in this business for long time,” explained one university administrator, “there is a general feeling across the state that teacher and administrator preparation is multifaceted and more than one group’s responsibility. Districts manage induction, universities prepare teachers, so there is a sense that we need to coordinate and connect with the state to follow through.”

Teacher Certification Policies. In 1998 Connecticut replaced its single permanent teaching certificate with a three-tiered licensure system, which includes an Initial Certificate (three-year, nonrenewable), a

Provisional Certificate (eight-year, nonrenewable), and a Professional Certificate (five-year, renewable).

To receive Initial Educator Certification to enter Connecticut classrooms, teacher candidates must complete an approved teacher preparation program, pass a basic skills test (Praxis I[®]) and an appropriate subject-knowledge test (Praxis II[®]), and complete a minimum of 10 weeks of supervised student teaching.

Within just three years of entering the classroom, beginning teachers must earn a Provisional Educator Certificate. This second-tier certificate is achieved through completion of 10 months of appropriate experience in Connecticut K–12 schools and successful passage of a performance-based portfolio assessment administered through the state’s induction program, the Beginning Educator Support and Training (BEST) program. The portfolio assessment examines teachers’ competence in discipline-specific pedagogy and requires evidence of student learning.

To receive Professional Educator Certification, teachers must demonstrate 30 months of successful appropriate experience in Connecticut K–12 schools and complete additional course requirements. The first issuance requires 30 credits in the teacher’s endorsement area. For continued renewal, teachers must provide evidence of sufficient professional development coursework (nine CEUs or 90 hours) during each five-year period.

For mid-career professionals interested in teaching, Connecticut’s ARC program offers two time-condensed pathways to initial certification called ARC I (8-week full-time instruction) and ARC II (24-week part-time instruction). Both pathways require a two-year period of closely supervised teaching in

Connecticut middle or secondary schools. The ARC program is considered one of the most comprehensive alternative routes in the country, requiring intensive instruction, assessment (Praxis I and II), and field experience under a collaborating teacher and ARC faculty.

At this writing, the content of the three-tiered certification pathways is under formal review by the CSDE, which includes consultation with teacher preparation program directors and institution of higher education (IHE) deans. The review aims to integrate current research and the teacher standards adopted in 1999 as *Connecticut’s Common Core of Teaching*. At all levels of the system there is a call for a holistic rather than piecemeal approach to defining the certification pathway. A number of IHE faculty shared concerns that their programs are overwhelmed by discrete requirements that have accumulated over the years, largely through independent legislative actions. IHEs are hopeful that with a full review, policymakers and state officials can identify what is essential for beginning teachers to know and be able to do to enter Connecticut classrooms. Such an approach would identify not only new areas for inclusion, but those that can be discarded or considered elective.

Program Accreditation. In 1998 Connecticut policymakers also changed the standards by which teacher preparation programs are authorized by the CSDE. Connecticut policymakers are transitioning their accreditation process from an input orientation to one that is “competency-based.” To this end, the SBE adopted the standards of the National Council for Accreditation of Teacher Education (NCATE) and criteria for teacher knowledge and skills advanced by national professional associations. The CSDE also uses the NCATE standards to review new teacher preparation programs seeking initial

approval. Teacher preparation programs are now reviewed on a seven-year cycle.

The adoption of the NCATE standards is expected to bring a number of benefits. State administrators hope the NCATE standards will enhance the comprehensiveness and consistency of the state accreditation process and bring a professional perspective on program accountability. The NCATE standards were adopted because they are well established, rigorous, and oriented towards continuous improvement. Explained one administrator, “Much of the activity over the last year and a half has been looking at how institutions develop systems to assess how effective they are in preparing teachers. Before, [the state was] basically looking at issues around infrastructure like the adequacy of faculty, good field experiences, mapping into the [state teaching standards], etc. Clearly, now we are pushing accountability through good self-assessment systems at institutions.”

As of 2006 all institutions are expected to implement the NCATE standards, along with Connecticut’s own teacher and content standards. To date, half of Connecticut’s teacher preparation programs have also earned accreditation directly from NCATE, with others currently under review.

Other Policies Supporting Teacher Quality.

The CSDE’s BEST program provides new teachers with a comprehensive induction program that includes mentor support, professional development, and a performance assessment. Teacher portfolios are reviewed by independent teams of evaluators selected by the state.

Developing a Culture of Evidence

TNE institutions are expected to foster a culture of evidence within their teacher education programs. State leadership can

facilitate IHE work in two important ways. Policymakers can create conditions that promote the generation and use of data within the state’s teacher preparation community. State actions and investments can ensure state data systems have the capacity to provide teacher preparation programs with meaningful information about the location and performance of their graduates.

In Connecticut, new performance-oriented certification and program approval policies are creating a demand for data about teacher, student, and program performance. These practices are reflective of the TNE focus on a culture of evidence. The strength of this emerging culture, however, will depend, in part, on state actions to improve the quality and accessibility of their data resources for IHEs.

Encouraging Evidence-Based Practice. The state’s adoption of the NCATE program approval standards is considered a major effort to encourage evidence-based practices within Connecticut’s community of teacher preparation programs. Under the NCATE standards, all teacher preparation programs are required to provide evidence of internal assessment systems capable of monitoring teacher candidates at different stages of development. Institutions must also provide evidence of routines for reviewing data to assess program quality. An advantage of adopting the NCATE standards in Connecticut, according to one state administrator, is that all institutions must now focus on each individual teacher’s developing competence and supply evidence of that individual’s readiness for certification.

The state has a few initiatives which aim to support IHE implementation of the NCATE standards. The largest investment included a \$2 million federal Title II Teacher Quality Enhancement Grant to support eight IHEs in

the reconceptualization of their teacher preparation programs around performance. From 1999 to 2003, these monies assisted IHEs in developing new internal assessment systems and new performance assessments to inform curriculum redesign. The CSDE has also sponsored professional development workshops and conferences to enhance the work.

An important shared product from this initiative is a Student Teaching Evaluation Rubric based on *Connecticut's Common Core of Teaching*. The instrument assesses the emerging proficiency of teacher candidates' instructional practice in the classroom. In this new instrument, state officials and some IHE faculty see a potential common basis from which all institutions can assess teacher candidate performance for graduation. The assessment also provides faculty with data immediately useful for program improvement. State officials are considering how to integrate this new assessment instrument with the NCATE program approval process. Currently the instrument is being piloted. To further promote data-driven practices, the CSDE is developing feedback surveys of student teachers, cooperating teachers, and faculty supervisors regarding the field experience requirement for initial certification. Again, the intention is for these survey data to provide IHEs with additional program data for improving the field experience component. The state's investment in these common instruments promotes a culture of evidence within individual IHEs and the larger community of preparation programs in the state. These common instruments have the potential to inform decisions at the policy and program levels.

Beyond program standards, the BEST portfolio assessment presents a robust policy mechanism for fostering a culture of evidence at both the teacher preparation and teacher

candidate levels. Teacher preparation programs are expected to cultivate an early respect for evidence-based practice in their teacher candidates. To earn Provisional Certification, their graduates must demonstrate a capacity to generate and use student data to justify their instructional choices. "The BEST teacher induction program helps to focus where we want teachers to be," one state official explained, "and also helps the institutions know what they need to be teaching their teachers. It is a real benefit now to have a student teacher evaluation that is using the same standards as what is being tested in the induction program." The Connecticut teacher standards are expected to drive both the institutional assessment of student teaching and the state assessment of the BEST portfolio, creating a common outcome. To help IHEs evaluate the efficacy of their programs, the CSDE is developing customized institutional reports that include aggregate passing rates on the BEST portfolio.

From a system perspective, the policy framework guiding teacher preparation and development is increasingly coherent, comprehensive, and focused on generating useful program data for institutions. These state policies are highly reflective of the TNE principles. Even with new expectations and strategic investments, however, state administrators are concerned about the capacity of all Connecticut teacher preparation programs to become performance-based. A challenge for state leaders will be to continue to provide strategic support for institutions as they continue to build and refine their internal data management and assessment systems.

Building High-Quality State Data Systems.

In Connecticut, as IHEs become more performance-oriented, a critical weakness in state capacity for policymakers to address is the quality of state-level education databases. Several Connecticut statutes authorize the state

to collect data regarding teacher workforce characteristics and student achievement. Information currently collected by the state, however, may not reflect the data IHEs need for program improvement purposes. Also, IHEs face several challenges in accessing and using these state data. IHEs pursuing the TNE principles and implementing the NCATE standards need help tracking their graduates within the state, and they need access to reliable longitudinal data that include background and performance data for both teacher graduates and their K–12 students.

Teacher Data. In Connecticut, teacher information is collected by the CSDE and warehoused in two separate databases.

- The *teacher employment database* includes teacher demographics, experience, salary, grades taught, and percentage of time spent teaching each subject. It also includes teacher leadership roles, such as department chair or curriculum coordinator. Starting this year, new fields will include teacher major and degree when first hired.
- The *teacher certification database* includes teacher demographic data, licensure area, state licensure test scores, and the Connecticut institution or agency that endorsed the teacher for certification. The teacher certification database does not contain teachers' grade point averages or affiliation with out-of-state teacher preparation programs.

These separate databases can be merged right now, but the capability is limited. Together they present a potentially rich source of information about teacher characteristics and performance for IHEs. However, many state officials and IHE faculty believe the quality and type of data collected could be improved to support IHE needs. UConn and others are

interested in data regarding teacher educational degrees, major/minor, degree institutions, and date of degree. Access to both databases would enable institutions to examine the retention and mobility of their graduates. UConn is planning such a study of its NSOE graduates.

Since these data were collected for different purposes, such as fiscal reporting and regulatory oversight, state officials and administrators may consider collaborating with IHE faculty in a systematic review of the strengths and weaknesses of the state's teacher databases. Such a review would identify the current data fields that hold immediate value to IHEs, as well as any new variables that would help IHEs examine the efficacy of specific program features.

Furthermore, Connecticut IHEs face an important obstacle in accessing these teacher data. Although the two databases can be linked for analysis using teachers' social security numbers (SSNs), the CSDE cannot release SSNs to third parties. These include IHEs. While aggregate reports are possible, IHEs need access to individual records in order to conduct more complex longitudinal analyses to explore individual program features and teacher characteristics. For example, UConn would like to study the long-term effects of specific preparation approaches on teacher retention and advancement and on K–12 student achievement. Providing individual teachers with a unique identifier would address security issues and help IHEs pursue internal studies for program improvement.

Student Performance Data. A second challenge concerns access to state-level student performance data by IHEs. Teacher preparation programs are designing their own assessments to measure student learning, but these assessments have limits. IHE education faculty consider state achievement tests an

important outcome indicator. Also, since program graduates are typically scattered across multiple districts, IHEs are eager to access state-level measures. The recent decision to administer state assessments in the spring rather than the fall has increased IHE interest. Assessing later in the school year encourages education faculty to consider state student performance data a resource for examining the effectiveness of their graduates and particular program features.

Many institutions are interested in using value-added approaches to examine the impact of their programs on K–12 student learning. This approach requires student data across consecutive years that are not available under the current state assessment system. Until recently, the state has administered two assessments: the Connecticut Mastery Test (CMT), which assesses student reading, writing, and mathematics skills in grades 4, 6, and 8, and the Connecticut Academic Performance Test (CAPT), which assesses student learning in mathematics, reading, writing, and science in grade 10. Some districts use commercially available tests to assess student achievement in the interim grades 3, 5, and 7. These student data, however, are not collected by the state. Moreover, it is highly unlikely that these tests can be linked with state assessments to examine student growth.

To meet the testing requirements of NCLB, the CSDE is expanding the state student assessment system. Beginning in March 2006 the CSDE will begin assessing students in grades 3–8 in reading, writing and mathematics. A science assessment in grades 5 and 8 will be added in 2008.

Linking Data Systems. A third challenge is developing the capacity to link teacher and student databases. As of this writing, this has not happened in Connecticut. One state

administrator noted, “It’s a project for the future, but most manpower is devoted to expanding testing to the off-grades required by No Child Left Behind.”

Until state databases are strengthened through new policies or adjustments to current data collection practices, Connecticut IHEs must work with individual districts to access student performance data. For example, UConn has designed a pilot study focused on elementary school literacy in partnership with Windham Public Schools. This pilot aims to assess the ability of growth curve analysis and other analytical techniques to measure the learning gains of fifth-grade students over a one-year period.

Exclusively accessing student and teacher data via districts, however, only offers IHEs a short-term solution. Until the state can improve its state data systems, the capacity of IHEs to become performance-oriented, as a community and individually, is highly dependent upon district will and capacity to provide teacher and student data. It also depends upon district interest in maintaining a long-term relationship with multiple IHEs around data sharing.

Facilitating IHE Access to Data. Yet another challenge centers on the accessibility of the data collected by the state. IHE faculty familiar with the state’s resources have raised technical concerns regarding the software used to manage teacher data. By industry standards, the software is outdated, and many believe it will become increasingly difficult to support in the near future.

Also, as IHEs implement new internal accountability systems, they need timely access to state-level data, which raises two related issues. From a capacity perspective, faculty report CSDE staff are responsive to their interest in state data but lack the

resources to prepare data for external use or to conduct analyses on their behalf. Given limited resources, the CSDE may also need procedures that expedite IHE requests and facilitate long-term access while providing for data security. One unresolved issue that could potentially constrain IHE access concerns the conditions of disclosure identified by the federal student privacy law known as the Family Educational Rights and Privacy Act, or FERPA. In thinking through the legal and political issues associated with data access, policymakers will have to consider where to build capacity in the system for data management and analysis and how best to secure student and teacher confidentiality.

Effective Engagement of Arts and Sciences Faculties

Stronger collaborative relationships between arts and sciences (A&S) faculties and education faculty can help teacher education programs strengthen the content knowledge of their graduates. For over two decades Connecticut's certification requirements have reflected high standards for teacher content knowledge. Institutions currently have few supports and incentives, however, to promote collaboration across these two faculties beyond coursework alignment with K–12 content standards. The state relies upon indirect mechanisms, such as program approval standards and grants, to foster communication across A&S and education faculties. For IHEs interested in pursuing this TNE principle, additional investments are needed to better conceptualize and deepen A&S engagement in teacher education.

Ensuring Strong Teacher Content Knowledge. Connecticut has long emphasized the importance of teacher content knowledge through its certification standards. Since 1993, Connecticut teachers have been required to hold a major in a subject area outside the

education school. In addition, teacher candidates are required to pass a subject-area assessment, the Praxis II, to achieve Initial Certification. Compared to other states also using the Praxis II assessment, Connecticut has set one of the highest cutoff scores in the country.

State officials and IHE faculty feel confident that beginning teachers prepared by Connecticut institutions have stronger content and pedagogic skills than teachers prepared out of state. “When we look at teachers coming in from other states where the emphasis is just on a liberal arts program,” one state administrator explained, “we see the weaknesses in those first few years where they are not as strong in pedagogy and they are definitely not as strong in their content area.”

Recent changes to certification have strengthened this emphasis. Teacher candidates in special education are now expected to complete an additional major in a subject discipline such as English or mathematics. Furthermore, to achieve Provisional Certification, teacher candidates are now required to demonstrate competence in content-specific pedagogy through the BEST portfolio performance assessment. To foster institutional responsibility for ensuring teacher content knowledge, the CSDE has developed customized reports by teacher preparation program that include aggregate pass rates on Praxis II and the BEST portfolio.

Facilitating Collaboration with A&S Faculties. Teacher candidates typically develop content knowledge through coursework with A&S faculties. One mechanism for ensuring stronger teacher content knowledge is through participation of A&S faculties in teacher education programs. An important issue is the degree to which the A&S curriculum fully addresses the state's K–12 content standards. Like many states,

Connecticut relies upon program approval standards to promote communication across these two faculties in order to ensure alignment. Explained one state administrator, “One of the first questions we ask when we are out there evaluating [programs] is, ‘Are those two entities talking to each other?’ It is an essential part of the review process.” For some institutions that have recently completed the NCATE review for the first time, state administrators report dramatic changes in internal communication across schools. “With NCATE, it clearly means that people in the education program have to work with arts and sciences,” explained one state administrator. “It cannot just be one small group of people deciding what the program will look like.” Beyond addressing this alignment issue, however, policymakers have largely left IHEs to determine the nature of A&S involvement in teacher education.

Program approval standards present a fairly weak mechanism for fostering the kinds of meaningful cross-school collaboration envisioned by TNE. Without additional leadership or policy supports from within the IHE community, the current reliance on regulatory standards may promote improved cross-school communication; however, it is likely to be superficial and short-lived, primarily driven by the program review cycle and focused on paper reviews of coursework against the K–12 content standards. TNE institutions expect both A&S and education faculties to take responsibility for teacher candidate performance on subject-matter assessments and for supervising the student teaching component as candidates learn to teach their subject. IHEs pursuing this TNE principle are interested in fostering an ongoing professional dialogue across these faculties that is firmly grounded in current teacher candidates’ understanding of disciplinary knowledge and related pedagogy.

For TNE to be successful in Connecticut, key issues require the attention of institution leaders and state officials. First, adjustments are needed in IHE incentive systems so that A&S contributions to teacher preparation are valued and rewarded. New incentives would address faculty load, promotion-tenure-reappointment requirements, and the university and college mission. Second, traditionally A&S faculties are minimally responsible, if at all, for teacher education. A strong foundation for cross-school collaboration requires a strategic cultivation of shared accountability between education and A&S faculties for teacher candidate content knowledge and instructional performance.

UConn is addressing this issue through the work of its assessment, induction, and curricular design teams, all of which include CLAS faculty members. Part of each committee’s work is to conceptualize the scope and depth of CLAS faculty involvement. A review of state policy documents and assessments are facilitating this conversation. For example, the assessment team has been examining the content areas covered by the Praxis II assessment and the pass rates by subject areas. In addition, the Student Teaching Evaluation Rubric presents a vehicle for broadening the conversation to content-specific pedagogy. UConn’s institution-wide survey of faculty involvement in K–12 education revealed “pockets of collaboration” that had evolved through personal interests and professional friendships. Through TNE, UConn is harnessing those relationships and interests at both faculty and graduate student levels through research and development grants, committee membership, and seminars. An estimated 45 A&S faculty members are involved in TNE, a level which many attribute to visible leadership at both the university and the college/school levels. For UConn, how to sustain and ultimately institutionalize this level of collaboration remains a challenge,

particularly in engaging CLAS involvement in the supervision of teacher candidates. “We need to provide incentives for faculty to get engaged with school districts and graduates at a very different level,” explained one IHE leader. “You have to look at the whole incentive system that you have for tenure. A lot of things in universities in some ways discourage this kind of a collaborative venture. With a grant like TNE, there may be incentives to get engaged initially, but how do you sustain that over time?”

With all teacher preparation programs expected to implement the NCATE standards fully as of 2006 and with UConn’s “highly promising” work, now is the time to take stock of the different approaches IHEs are taking to engage A&S faculties in teacher education. Connecticut IHEs would benefit from opportunities, perhaps facilitated by both the CSDE and CSDHE leadership, to share successes and identify institutional policies, practices, and resources that support such progress. Through such forums, institutions could also surface obstacles that may require state action or further investment. State leaders might also provide opportunities for institution-wide dialogue through grants supporting joint research and development or the design and delivery of content-specific professional development seminars for K–12 educators.

Conceptualizing Teaching as a Clinical Practice

Another focus of TNE is increased emphasis on teaching as a clinical practice profession. University faculty should be actively guiding teacher candidates in clinical settings, i.e., schools and classrooms, directly honing candidate skills in assessing student needs and designing effective curriculum and pedagogy. Institutions with a strong conception of teaching as a clinical practice develop

residency or induction programs and take responsibility for improving the performance of beginning teachers.

Connecticut state policies reflect the TNE emphasis on teaching as a clinical practice profession. These policies include the pre-service field experience, the state’s comprehensive induction program, and the use of teaching portfolios as a gatekeeper for continued certification. State leadership is needed to strategically consider the role of teacher education programs in continuing to guide teacher development beyond student teaching.

Encouraging Teaching as a Clinical Skill.

A number of Connecticut policies promote teaching as a clinical practice. First, to achieve Initial Certification, teacher candidates must complete at minimum of 10 weeks of student teaching. Some institutions offer longer and more varied classroom experiences for their teacher candidates.

Recent changes have strengthened the clinical practice component. The state is currently emphasizing that the quality of the fieldwork experience provided by IHEs directly contributes to beginning teacher success. The development of the Student Teaching Evaluation Rubric for use across teacher preparation programs intends to improve the rigor and consistency of all candidate field experiences. State officials hope the assessment instrument will lead to consistent expectations for student teaching across all teacher preparation programs in Connecticut. Furthermore, Initial Certification now requires multiple, diverse field placements so that candidates’ pedagogical skills are honed under different classroom conditions. One state official explained, “In about five or six years, 44% of the state’s teachers will be retiring. We need to replenish that crop, and we need teachers who are able to teach in the inner city

priority districts. As a part of the state regulations for teacher clinical practice, they must have an urban and a suburban or rural experience.” This requirement aims to better prepare the next generation of teachers for shortage subject areas, but also geographic regions where the students are most at risk of not meeting state standards.

A second emphasis comes through the promotion of formal partnerships between Connecticut teacher preparation programs and select Professional Development Schools and their districts. One state official explained, “The strength of the certification pathway is an emphasis on fieldwork. Every teacher preparation professor knows principals and curriculum supervisors in nearby districts.” The NCATE standards reinforce these collaborative partnerships, expecting institutions to work with K–12 school partners to “design, implement, and evaluate field experiences and clinical practice.”

According to some education faculty, however, there are several challenges to realizing the full potential of these partnerships. At UConn, for example, education faculty working with teacher placements have found some district officials and school administrators “too busy” or “stressed” to develop deeper professional relationships with faculty. Also student teacher placement in districts where curricula are prescriptive and narrowly focused on test preparation is undermining institutional efforts to cultivate a “research-oriented disposition” during student teaching. Education faculty have found that highly specified curricula and pacing charts inhibit student teachers from developing routines that use data and reflection to revise instruction. Both state officials and university faculty have raised concerns about districts’ generally “obsessive response” to tests with ongoing test preparation. Through formal communication

and informal dialogue, state officials have openly encouraged districts to take a balanced approach to student learning and to attend to school climate.

Supporting Teacher Induction. Connecticut policymakers, state officials, and education faculty have long recognized the importance of supporting beginning teachers’ first years in the classroom. Since 1989, the CSDE has provided a statewide induction program for all beginning teachers in the state, the BEST program. Of those beginning teachers participating in BEST, about 65% are graduates of Connecticut teacher preparation programs.

Although some districts have developed their own programs, induction services are fairly centralized. The state currently provides professional development to beginning teachers and mentors (20 hours), both seminars and portfolio clinics, through the Regional Educational Service Centers (RESCs) across the state. RESC staff work with districts to identify local facilitators and appropriate local mentors or support teams for beginning teachers.

BEST enjoys wide participation, in part because provisional certification is contingent upon successful completion of the program. Over the past 25 years, it is estimated that almost half the current education workforce has participated in the BEST program either as a beginning teacher, a mentor, or a trained observer.

State supports for teachers have expanded and evolved over the years. All beginning teachers are now mentored for at least one full year. In 1999, the current performance-based portfolio replaced an observation instrument used to assess teacher instruction. State officials consider the BEST teaching portfolio a more valid method for evaluating teaching practice

because it considers teaching competence over a period of time and draws upon multiple sources of evidence to gauge the impact of teaching on learning. Furthermore, each teacher portfolio is reviewed by an independent evaluation team of two or three state-trained educators. State officials would like institutions to use the BEST portfolio process as a tool for providing feedback to beginning teachers.

State administrators are hopeful that institutions will play a greater role in the BEST program, particularly since beginning teachers must pass the portfolio assessment to achieve Provisional Certification. However, IHE faculties are seen as reluctant to become involved. Explained one administrator, “Most institutions will tell you, ‘We prepare the teachers and do the best job that we can, but once they leave it is beyond our control.’” Even so, efforts to encourage IHE faculty to serve as portfolio scorers aim to increase their familiarity with the portfolio process and the expectations that beginning teachers must meet. Beyond this level of involvement, a larger role for the teacher education community in teacher induction has not been strategically pursued.

Institutions face challenges in designing an induction program that can integrate with state program resources and local mentoring. At UConn, education faculty is exploring different induction program options. One possibility is offering beginning teachers subject-specific coaching and opportunities to explore broader questions of teaching. This focus would complement the day-to-day advice about school culture that mentors are often well positioned to provide. It might also improve teacher access to expertise in pedagogical content knowledge, which sits at the core of the BEST portfolio assessment. According to a 2002–2003 survey of beginning teachers, only 62% had access to a

mentor who was both in their content area and located in the same building. Small districts in particular face a considerable challenge in finding appropriate mentors.

IHEs also seem well positioned to provide support to beginning teachers who must prepare their teaching portfolio for independent review by the second year of teaching. Beginning teachers are turning to other teachers for help in completing their portfolios. The CSDE’s 2002–2003 survey of beginning teachers revealed that of the BEST program resources available, beginning teachers considered their strongest sources of support to be district facilitators and beginning teacher peers who were either completing portfolios or had recently completed the program. Less favorable sources included BEST seminar leaders, principals, and department chairs. Again, IHEs appear potentially well positioned to fill this gap, as faculty would be familiar with candidates’ strengths and weaknesses and able to offer expertise in instruction and assessments to guide teachers as they transition to the classroom and prepare their teaching portfolio.

At UConn, elements of the BEST portfolio have already been incorporated into program coursework and field experiences. As preparation for the BEST portfolio, all UConn teacher candidates graduate with electronic portfolios that document their emerging teaching practice. Candidates engage in lesson reflection and curriculum design, and develop and review videotaped lessons. Currently UConn is using a web-based system to provide a central communication platform for sharing lessons, student work, assessment data, reviews, and readings, among other items, and for archiving teacher learning over time. In scaling up its induction program, UConn is considering a pilot with its graduates in elementary science and secondary

English/language arts. To ensure its induction program complements and deepens the state's BEST program, UConn is seeking the advice of CSDE representatives who serve as members of its internal induction committee.

If IHEs are to take on a role in beginning teachers' induction, they will need new financial resources. The development of an induction program will require a new cadre of supervisors and material supports. The UConn program may prove a resource for developing cost estimates to support other IHEs in program design and implementation.

Towards Supporting, Spreading, and Sustaining TNE Reforms in Connecticut

State policies in Connecticut regarding teacher licensure, program standards, and induction are supportive of the TNE principles and the work under way at UConn. To further strengthen and deepen the move towards a performance-oriented system of teacher preparation and induction, a number of issues require the attention of policymakers, state officials, IHE leaders, and stakeholder groups responsible for ensuring teacher quality in the state.

Addressing IHE Access to Appropriate Data. New teacher certification and program approval policies are creating a demand for data about teacher, student, and program performance. The common Student Teaching Evaluation Rubric is an important step in providing information about the emerging proficiency of teacher candidates' instructional practice in the classroom that can be used for program improvement. But IHEs need additional information about teacher characteristics, performance, and practices, as well as outcome data regarding student learning to evaluate their programs. The

adequacy and availability of such data to IHEs could be improved. In considering this issue,

- What is the fit between data available from state agencies and the data that IHEs need to pursue program improvement?
- How can state data collection and archival practices be redesigned to provide appropriate data to IHEs?
- How can the state, IHEs, and local school districts collaborate to develop a comprehensive data system in support of teacher and student learning?

Expanding the Role of A&S Faculties in Teacher Education to Strengthen the Quality of Teacher Content Knowledge.

Incorporating the NCATE standards into Connecticut's program approval process has the potential to significantly increase communication between A&S and education faculties. However, these cross-school communications do not necessarily lead to ongoing and in-depth professional dialogues grounded in teacher candidates' understanding of content and related pedagogy. They may also not necessarily foster shared responsibility for the preparation and supervision of prospective teachers. A broader role for A&S faculties in teacher education could be more fully conceptualized and articulated by state leaders and Connecticut's teacher preparation community. IHE leadership is also needed to ensure that A&S involvement in teacher education is valued and rewarded. In considering this issue,

- How have IHEs promoted stronger collaboration across education and A&S faculties and encouraged a sense of shared responsibility for teacher quality?
- What adjustments may be needed in the IHE incentive system, such as faculty load,

tenure requirements, and the university and college mission, to support these strategic collaborations?

Involving IHEs in the Induction of Beginning Teachers. Connecticut's BEST program is a well-developed and nationally recognized system of beginning teacher induction. However, the higher education community has not been substantively involved in the induction process, even for their own students. The role that IHEs might play needs to be explored with full consideration of IHE capacity and complementary with existing state and district programs. In considering this issue,

- What are the roles IHEs see for themselves in supporting their graduates as they begin teaching? What roles do state agencies and districts see for IHE involvement?
- How can the state promote coordination between IHE efforts to support their graduates and existing induction programs?
- What new resources are needed to support the expansion of IHE responsibilities to include their graduates' transition to teaching?

Resources for Additional Information

Teachers for a New Era (TNE)
<http://www.teachersforanewera.org>

Teachers for a New Era at the University of Connecticut
<http://www.tne.uconn.edu>

Connecticut State Department of Education
<http://www.state.ct.us/sde>

Connecticut State Department of Higher Education
<http://www.ctdhe.org>

About CPRE

The Consortium for Policy Research in Education (CPRE) studies alternative approaches to education reform in order to determine how state and local policies can promote student learning. Currently, CPRE's work is focusing on accountability policies, efforts to build capacity at various levels within the education system, methods of allocating resources and compensating teachers, instructional improvement, finance, and student and teacher standards. The results of this research are shared with policymakers, educators, and other interested individuals and organizations in order to promote improvements in policy design and implementation.

CPRE unites five of the nation's leading research institutions: the University of Pennsylvania, Harvard University, Stanford University, the University of Michigan, and the University of Wisconsin-Madison.

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