

## California

### 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 high-quality teacher education programs 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: 92**  
**Initial Teacher Certificates Issued: 27,822**  
**K-12 Public School Teachers: 305,855**

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 Faculty.** The education of prospective teachers would include the full engagement of faculty in the disciplines of the arts and sciences to ensure teachers obtained the depth of subject-matter understanding and pedagogical-content knowledge needed to grasp and address students' learning needs. Arts and sciences faculty 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 and

districts, use of exemplary K-12 teachers as clinical faculty appointed to the college of education or the college of arts and sciences, 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 reconsidering their use of the knowledge base, their collection and use of evidence, their curriculum and standards, and their school-based relationships to produce higher-quality teacher candidates. The accomplishments of these institutions will offer interested policymakers, university leaders, and state education officials blueprints and tools to help them improve teacher preparation programs elsewhere. 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 the efforts of these programs to undergo restructuring and to foster a culture of evidence, engage arts and sciences faculty, 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 California, and where appropriate we offer concrete examples from the restructuring now under way at California State University at Northridge and at Stanford University; two of the 11 institutions across the nation to receive TNE grants.

## California State University at Northridge

California State University, Northridge (CSUN), is a public institution serving over 33,000 students in Los Angeles' San Fernando Valley. The student body reflects the ethnic diversity in Los Angeles. A majority of the students transfer from nearby community colleges and/or have graduated from schools in Los Angeles Unified School District. Many are the first in their families to earn a college degree.

The Michael D. Eisner College of Education is a major teacher training institution in southern California, graduating over 1,300 qualified teachers each year. Over 4,000 students were working to earn teaching credentials at the college in 2004-05—almost 3,000 in regular programs, including student teaching and about 1,000 others in internship programs. Multiple pathways to a teaching credential are a feature of teacher preparation at CSUN. The pathways include: 1) An undergraduate program that allows students to earn a bachelor's degree and a teaching credential in four years; 2) the Accelerated Collaborative

Teacher Education Program, which is a post-baccalaureate program developed in partnership with the Los Angeles Unified School District (LAUSD) for elementary, secondary, and special-education candidates; 3) intern programs that have been developed collaboratively with several districts; and 4) a new elementary program developed under the auspices of TNE that allows candidates to complete requirements on-site at two LAUSD schools.

In 2002, CSUN received a \$5 million challenge grant from Carnegie Corporation's TNE initiative. The effort to redesign teacher education at CSUN is now well underway. Led by a steering committee composed of faculty and administrators from the education and arts and sciences colleges and partners from LAUSD and local community colleges, the work of redesign is being carried out by 14 work groups known as Objective Groups. Each of these committees is led by a member of the steering committee and each focuses on a specific aspect of the redesign such as establishing pilot clinical partnerships, establishing good assessment practices as part of clinical teaching, or investigating how to increase the depth of subject-matter knowledge among the candidates. An Evidence Team is working with each of the Objective Groups to ensure that each group keeps a focus on the first TNE principle and collects evidence, through appropriate methodology, that will provide answers to critical questions.

Considerable progress has been made with the redesign in accordance with the three TNE principles described above. To build an evidence-based culture, CSUN has joined the LAUSD Program Evaluation and Research Office and the California State University system to design a data warehouse. Supervisors of student teachers can complete their evaluations on-line. They have done

extensive work on issues of methodology to ensure that rigorous studies can be conducted, and they have conducted pilot studies examining teacher effects on student learning in the different pathways. The Evidence Team is designing a longitudinal study of the impact of CSUN's preparation program on student achievement.

To strengthen and promote the clinical aspects of teacher preparation, CSUN has developed three clinical sites with LAUSD and launched a pilot program in which all coursework is provided at the school sites. In other words, they are focusing intensely on a small sample within the network of at least 500 schools that they serve. They also developed a joint Induction and Masters Program with LAUSD, and they appointed six teachers-in-residence, including one in mathematics, one in English, and one in geography. CSUN is using its affiliated high school, Northridge Academy, to study the effects of arts and science faculty participation in the development and delivery of curriculum. It also is monitoring the effects of reading tutorials on both credential candidates and pupils. Finally with LAUSD, CSUN has launched a Joint Induction program, culminating in a master's degree, that enhances beginning teachers' practice, with applicable immersion in content, pedagogy, and classroom management. Participants are mentored, observed and interviewed after graduation, too, so that program effects on teaching and pupil learning can be tracked in the out years.

To promote collaboration between the education and arts and science faculties, CSUN has developed partnerships with local community colleges to strengthen and align the coursework that teachers take before they enter the preparation programs. They have developed new courses in science, convened pedagogical content-knowledge study groups in a number of disciplines, and begun to study

the subject-matter courses to determine which have the greatest impact on teachers' knowledge. They are examining alternative models of general education and studying the effects of their own general- education program.

Perhaps the most important achievement has been a tripartite agreement among CSUN, LAUSD and the California State University (CSU) Chancellor's Office to correlate teacher preparation data with teacher observations and pupil performance. The partnership has produced a large-scale database that is enabling longitudinal studies of the effects on teacher preparation programs and pathways. The National Center for Research on Evaluation, Standards, and Student Testing (CRESST) is assisting with the analysis. Altogether, they are exploring the extent to which they can develop valid and reliable comparisons between CSU and non-CSU teachers as well as among programs at CSUN and pathways through them.

## Stanford University

Stanford University is a private university serving nearly 14,000 students from across the nation. Over half of the students are enrolled in post-baccalaureate programs. The School of Education is a graduate school serving 376 students, almost half of whom are enrolled in doctoral programs.

The School of Education enrolls about 70 students in its secondary-teacher preparation program, a 12-month post-baccalaureate program. It also enrolls about 20 students in a new elementary program that begins in the undergraduate years and continues through a 5<sup>th</sup> year master's degree. Both programs combine a full year of student teaching with 45 credits of graduate coursework leading to a master's degree in education and a California teaching credential. The program is known as

STEP, for Stanford's Teacher Education Program. Its small size, access to faculty, and coherent design offer focused and personalized instruction combined with carefully designed clinical experiences and mentoring. STEP candidates student-teach in the classrooms of expert cooperating teachers in local professional-partnership schools, taking on increasing responsibility over the course of a full year. STEP also provides supervision and mentoring by supervisors who are experienced teachers of the subjects they supervise. Stanford faculty members and practicing teachers co-teach selected courses of the STEP curriculum in conjunction with the clinical experience.

In 2003, Stanford received a \$5 million challenge grant from Carnegie Corporation's TNE initiative. The redesign of teacher education at Stanford is led by a leadership team including faculty within and outside the College of Education, and an ambitious plan is underway to redesign teacher education in accord with the three TNE principles.

To develop a culture of evidence and promote evidence-based decision-making, the TNE team at Stanford has developed a data-management system, STEPnet, that allows the team to collect and analyze data on both students and graduates. It also supports research studies in cooperating schools to examine the relationship between pre-service program characteristics, teacher quality, teaching practices, and student- achievement gains. The data being collected include surveys of incoming and exiting students and performance assessments of candidates conducted through the Performance Assessment for California Teachers (PACT) program. PACT was created in response to California Senate Bill 2042, and consists of a series of embedded assessments and a capstone teaching event conducted over the course of a year. The assessment system draws

on teacher plans, student-work samples, videos of teaching, classroom artifacts, and candidate reflections to help students learn to apply subject-specific, research-based teaching strategies. Twenty other institutions in California now participate in PACT assessments. Research on PACT shows the vast majority of faculty and students feel they improve their practice as they complete PACT or engage in scoring and analysis of the results.

Humanities and science faculty at Stanford are working with education faculty on the redesign of teacher preparation. Subject-matter -specific discussion groups involve faculty from both colleges. The focus is on the development of additional subject-matter programs. New, blended, co-taught courses have been designed in partnership with the English department and the mathematics department. Staff from the university's Writing and Rhetoric Center have helped establish writing centers in three local high schools.

Stanford is working on teacher training with eight professional-development schools, one of which is a K-12 charter operated by the Stanford Schools Corporation in East Palo Alto. These professional-development schools model good practices, support teacher education for both pre-service teachers (by providing placements) and in-service teachers (by engaging in collective professional development and inquiry), and engage in co-reform and co-research activities with the university.

Finally, Stanford works with the New Teacher Center and the state's Beginning Teacher Support and Assessment program (BTSA) to enhance the support provided to graduates. The induction program includes local mentoring, on-line supports for graduates across the country, and a summer institute for alumni that draws on humanities and science

faculty as well as education faculty to offer professional development to graduates.

## The Education Policy Context

The governance structure for education in California is complex. The overall coordinating body for higher education is the California Post-Secondary Education Commission, which consists of 16 members, nine of whom represent the general public, five who represent the major systems of California education (California Community Colleges, California State University, the University of California, independent colleges and universities, and the State Board of Education), and two student representatives. However, the functions of the commission are limited. The primary function is to develop a statewide plan for the operation of an educationally and economically sound and coordinated system of post-secondary education and to identify and recommend policies to the governor and Legislature that meet the needs of the state. The commission's role is to advise state leaders on policy and budget priorities that best preserve broad access to high-quality post-secondary education opportunities, and to deal with issues of growth, quality, and workforce development.

Each segment of public higher education—the University of California, the California State University system, and the Community College system—has its own structure that develops and lobbies for policies and budget allocations that support its mission and benefit the institutions in its system. Add in the independent sector, as well as numerous intercollegiate bodies, and it is easy to understand how the politics of higher education can become quite complex.

All of these sectors of higher education play roles in teacher education. About half of California's teachers come from the California State University system, and half come from independent colleges. The community colleges also provide general education and content preparation for a large share of teacher education candidates who later transfer to other campuses in the state.

Teacher education is regulated by an independent agency, the California Commission on Teacher Credentialing (CCTC), whose members are appointed by the governor. The CCTC is responsible for setting standards, licensing, accreditation, and professional discipline. It operates like a medical board, governing professional training and the acquisition and continuance of professional licenses.

The development and implementation of K-12 policy is equally complex. The State Board of Education oversees the Department of Education which is headed by an elected state superintendent of public instruction. However, there is also an appointed secretary of education who is a member of the governor's cabinet. The state superintendent and the secretary both offer advice to the governor and Legislature and develop state initiatives to improve the public schools.

The Office of the Legislative Analyst (LAO) has raised questions about the complexity of the current K-12 governance structure, particularly in the area of teacher policy. The criticisms include excessive regulation, blurred lines of accountability, and lack of policy coherence (LAO, 2006).

**Education Reform.** The foundation for recent school-reform efforts in California are based on pupil performance grounded in academic standards adopted in 1997 and 1998 and a system of accountability passed in 1999,

known as the Public Schools Accountability Act (PSAA). The state's implementation of the standards and accountability has been heavily influenced by the requirements of No Child Left Behind (NCLB) and by the effects of the state's fiscal problems. The original accountability program included awards for schools that made progress. It also included an intervention program that would provide extra support to help underperforming schools improve, but would eventually apply sanctions to those that failed to do so.

These facets of the law operated largely as envisioned for the first two years. Then in 2001, a looming state budget problem and growing concerns about the lowest-performing schools in the state prompted changes. Funding was first cut and then discontinued completely in 2002-03.

NCLB calls for a significantly different calculation of school progress—one that establishes a single target for all schools, regardless of their starting point. The federal law states that all students shall reach proficiency in English language arts and math by the 2013-14 school year and that states, school districts, and schools must make Adequate Yearly Progress (AYP) toward that goal.

The federal provisions require that schools not making AYP be designated as Program Improvement schools subject to a series of escalating interventions. However, this requirement only applies to schools that receive funding through the federal Title I program. More than 5,000 of California's approximately 9,000 schools participate. From the outset, NCLB compelled the states to make the AYP system and Program Improvement program an integral part of their accountability systems.

California has aligned its testing program to its standards and to NCLB through the Standardized Testing and Reporting (STAR) program, which tests students in grades 2-11, and through the California High School Exit Exam (CAHSEE). The central component of STAR is the California Standards Tests (CSTs), which assess student mastery of the state content standards in the four core subjects. Results of these tests are reported based on five performance levels: advanced, proficient, basic, below basic, and far below basic. A second component of STAR is a norm-referenced test used to compare the performance of California students to a national sample.

## **The State Role in Teacher Preparation**

California, like other states, exercises its primary influence over teacher education through two major policy mechanisms—teacher certification and accreditation of teacher preparation programs. California also has a mandated two-year induction program, the Beginning Teacher Support and Assessment program (BTSA). A description of how these three mechanisms operate is summarized below.

Teacher preparation and licensing in California, long a state interest, became a more important focus when standards-based reform was implemented in the mid-1990s. In 1997, the California Commission on Teacher Credentialing (CCTC), the California Department of Education (CDE), and several other groups agreed on some guiding principles for addressing issues of teacher quality in the state. The resulting California Standards for the Teaching Profession (CSTP), and the related Teaching Performance Expectations (TPEs) have been the basis for developing new standards for teacher preparation programs, induction programs, and

assessments of new teachers. The result is improved articulation between teacher preparation and induction programs. In 1998, the Legislature directed the CCTC to overhaul the standards guiding subject-matter preparation for elementary teachers, professional teacher preparation programs, and teacher induction programs through SB2042. The emphasis was placed on knowledge of subject matter. The statute established a two-stage credentialing system in which individuals who can demonstrate subject-matter knowledge in the area in which they will teach, professional knowledge, and personal fitness (lack of criminal behavior) can be awarded a preliminary credential. There are separate requirements for multiple-subject credentials (elementary) and single-subject credentials (secondary). These credentials are valid for five years. If teachers complete an approved induction program (BTSA) during this period and meet certain other requirements, they are awarded professional certificates. This bill moved final responsibility for issuing a “clear” credential from the institutions of higher education to the school districts, as it placed the responsibility for induction and the funding for it with them.

A more recent piece of legislation, SB1209, removed the link between the renewal of credentials and professional-growth requirements. Effective January 2007, teachers are no longer required to complete 150 hours of professional development every five years.

The CCTC issues 55 different types of licensing documents authorizing individuals to teach. There are 20 different teaching credentials, eight types of emergency permits, and a variety of other forms of licenses. Within the single-subject licensing category, there are 21 different single-subject credentials (such as English, mathematics, physics), 63 supplemental authorizations (such as anthropology and journalism), and 26

additional subject-matter authorizations (such as art history and English composition).

Institutions of higher education had until 2003 to submit plans to show that their multiple-subject preparation programs were in compliance with SB2042. The CCTC also developed new standards and new subject-matter tests for single-subject licenses.

**Teacher Testing.** To obtain a license to teach in California, all candidates must take the California Basic Educational Skills Test (CBEST). They also must demonstrate knowledge of the subject they are going to teach. Multiple-subject candidates must pass the California Subject Examination for Teachers (CSET), which replaced the Praxis examination. Single-subject candidates can either take a test or complete a CCTC-approved subject-matter course of study.

The chancellor of the CSU system had issued an executive order requiring students desiring to enroll in a multiple-subject program to pass the CSET before being admitted to a teacher preparation program. But this rule has now been left to discretion of the campuses since an unintended consequence was to drive students to seek alternative routes into teacher preparation.

In addition, candidates must pass a test on the U.S. Constitution, and multiple-subject candidates must pass the Reading Instruction Competency Assessment before they are licensed.

In SB2042, lawmakers also directed the CCTC to develop a Teaching Performance Assessment that is aligned with the CSTP and TPEs and requires new teachers to demonstrate competency in teaching to the state's academic-content standards for students. The CCTC began to develop this new assessment in 2001, working with the Educational Testing Service (ETS). However,

budget cuts and lack of an allocation of funding to the institutions to implement the new requirement have delayed implementation. Some institutions have moved forward, and the CCTC has trained Teacher Performance Assessment (TPA) assessors at many institutions. Institutions are permitted to develop their own performance assessments, and a group of institutions have collaborated to develop the Performance Assessment for California Teachers (PACT), which provides an alternative to the TPA. More than 20 institutions now belong to the PACT Consortium, which is described above in the section on Stanford University.

The current teacher credentialing system has been applauded for the quality of its standards, but its multiple testing requirements and paperwork processes for the credential have been criticized by the Legislative Analyst's Office and others as being too complex, too costly, and unnecessarily redundant. Until recently, there was no direct reciprocity with other state licensing systems, only a complicated system of equivalences, which has made it difficult to bring a credential from another state into California, despite large shortages in poor urban and rural areas. A recent law, SB 1209, passed in 2006, both enhanced reciprocity and proposed reduced testing burdens through combining some existing tests and eliminating redundant testing for out-of-state entrants.

**Alternative Pathways.** The state permits two types of alternate-route programs—one operated by school districts and the other by universities. These are known as intern programs and are available to candidates who hold a bachelor's degree or higher from a regionally accredited institution of higher education and who have a major or minor in the subject to be taught. The intern programs allow candidates to be placed in classrooms as teacher of record while completing training,

but the programs must meet the state's TPEs and certain other requirements (see below) in addition to providing mentoring. After completing an internship program, the candidates receive initial certification and still must go through a two-year BTSA program. Los Angeles has developed a three-year program that integrates the internship with the BTSA program.

These candidates must demonstrate subject-matter competency either through examination or completion of a state- approved academic major. They must complete a course or examination on the U.S. Constitution and undergo fingerprint clearance. They must complete 120 clock hours of training prior to placement in a classroom (district) or complete methods courses while employed as an intern teacher (university). They also can take a test as an alternative to teacher preparation coursework.

District internships began in 1984, and in 2005-06, nine districts ran programs serving about 900 teachers. In 2002-03, 631 teachers went through these programs, representing about 2 percent of the total number of credentials awarded that year by the CCTC. University intern programs have grown rapidly since 1995-96 and there were 87 programs serving about 8,000 candidates in 2004-05. There has been rapid growth in intern programs for special-education teachers because of shortages in this area.

In addition to intern programs, California has offered some other pathways to teaching, including a pre-internship for those who were working on emergency permits or waivers, to help them complete content coursework and tests to enroll in internship programs. The emergency permit recently was replaced by a "short-term teacher" permit. CalStateTEACH offers a distance- learning option for candidates who are not yet employed. Four

regional centers served about 1,000 candidates in 2003-04.

**Accreditation of Teacher Preparation Programs.** Responsibility for accreditation of teacher preparation programs rests with the CCTC. All institutions offering teacher preparation programs must be accredited by the CCTC and by a regional accrediting body. In addition, institutions may opt to seek national accreditation; about one quarter are accredited by NCATE. The state has a partnership with NCATE, and conducts joint accreditation visits for the programs that seek NCATE accreditation.

The current state-accreditation process is based on a 1993 statute that required the CCTC to develop standards for preparation programs. The standards consist of eight common standards, 19 program standards, and 116 program elements. This system is currently under review by the CCTC and a revised system will be put in place soon.

For new programs, CCTC staff review written proposals to determine if they meet standards. Until recently, existing programs were visited every five to seven years by an accreditation team composed of faculty, K-12 teachers, and administrators. These teams make recommendations to the Committee on Accreditation, a 12-member body that decides whether to accredit the institution, accredit with stipulations, or deny accreditation. The same process is used for district and university internship programs.

From 1997 to 2002, 73 accreditation visits were conducted, and half the programs were fully accredited. The rest received accreditation with stipulations. None was denied accreditation. Visits were suspended in 2003 and 2004 due to budget cuts and a review of the accreditation system by the CCTC.

Since 2004, only joint accreditation visits with NCATE have been conducted.

The current accreditation process has been criticized as relying on vague and subjective standards, focusing on inputs rather than outcomes, occurring too infrequently, and focusing on institutions rather than specific programs. The Legislative Analyst's Office and some reform groups have called for the establishment of a performance-based accreditation system. They would like to see a state system that examines performance of teacher preparation programs annually, and considers measures such as average scores on credentialing exams, graduation rates, employment rates, retention rates, and employer satisfaction. In recent months, the CCTC has proposed initiating such a system.

### **Induction of Beginning Teachers.**

Established in 1992 through SB1422 as a permanent program in California, the Beginning Teacher Support and Assessment (BTSA) program initially was a voluntary program designed to assist beginning teachers in translating their pedagogical coursework into successful classroom practice. Lawmakers hoped that induction would not only improve classroom practice but would persuade more new teachers to stay in the profession. The CCTC developed standards for the program over time, and they were formally adopted in 2001. The standards incorporate uses of technology and strategies for working with mainstreamed students and English-language learners. Based on a favorable evaluation of BTSA in 1997 showing improved retention rates, lawmakers passed SB2042 to expand the program so more new teachers could participate.

The CCTC and CDE jointly administer the BTSA program, which is delivered by 149 providers including school districts approved by the CCTC. Each BTSA program offers

ongoing support from experienced colleagues at the school site and a formative-assessment process, or the California Formative Assessment and Support System for Teachers (CFASST), which is the cornerstone of the program. BTSA also provides workshops and seminars.

BTSA programs only serve fully qualified teachers. They do not serve interns or teachers working on emergency certificates or as long-term substitute teachers. Districts serving low-income students have more teachers in these categories, and these teachers do not have access to BTSA programs. This contributes to inequities as these teachers do not receive the support they need, and therefore are less able to serve their students, although by law the intern programs, which serve many high-poverty schools, are required to provide mentoring and other supports..

Funding for BTSA has been stable since 2001. Providers receive \$3,600 per teacher each year, and 95 percent of the teachers in the state have access to a funded program.

## **Developing a Culture of Evidence**

TNE institutions are expected to foster a culture of evidence in their teacher education programs and to use data to drive program improvements. For this to occur, high-quality statewide data systems are needed to help institutions track the placement and effectiveness of their teacher graduates. The tripartite agreement among CSUN, CSU Chancellor's Office, and LAUSD is an important first step in data consolidation and analysis on a large scale. CSUN and the CSU Chancellor's Office are working with 21 other CSU campuses, with intense focus on the state's southern tier, to develop the use of data as a resource. But state leadership and investments are needed to expand these data

systems, which will contribute to understanding what should change in teacher preparation and support. Mandates for accountability are a start; but investments in systems, protocols, and research are the essential means to the end—improving pupil learning by enhancing teacher training and practice.

### **Education Data Systems in California.**

Like many states, California has separate data systems that are not easily linked. There are both technical and political barriers to establishing the links needed to track the performance of teachers over time. The Department of Education (CDE) maintains the California Basic Educational Data System (CBEDS) database, which includes information on the courses currently taught by teachers, demographic information on schools, and student-assessment results. The CDE is setting up a system of student identifiers that will allow the state to track the performance of students over time regardless of the school or district in which they are enrolled. The Legislature authorized the CDE to conduct a feasibility study for a teacher information system in 2006.

However, information about new teachers and their scores on state teacher tests is currently collected and maintained by the CCTC, and there is a perception that relations between the CDE and CCTC are not highly cooperative. The CCTC database is internal to the agency and is not linked to other state databases. The different state databases do not use a common teacher identifier so they cannot be linked and the value of the data collected is substantially reduced. And information about the performance of teacher candidates in coursework and student teaching is held by the institutions they attended.

Although two major studies—by CSU and by Stanford and the PACT consortium—are examining the relationships between the

student-teacher pathways, teacher retention and student performance, such analyses cannot be routinely conducted using a state database that, for example, does not contain granular evidence of undergraduate and teacher candidate learning, too.

The studies underway by the CSU system and Stanford University (with the PACT consortium) will provide important analyses; however, those studies will not answer all the questions the state will want to address on an ongoing basis in support of program quality. Hence, state leadership should support a more integrated approach that would capitalize on the research capacity of the state's universities and think tanks. Indeed, it is the learning crisis in K-12 that soon will mature into a knowledge crisis in the economy. In the past, when faced with challenges to American education, leadership has nurtured the capacity to research and solve the problem. Historically, universities have responded well.

The BTSA program also generates data about teachers. BTSA programs use a variety of methods to provide beginning teachers with feedback and targeted support based on performance data. These programs use the CFASST or an approved local assessment system to provide formative assessment of teaching practice. The CDE's BTSA database contains demographic information on a number of BTSA programs, beginning teachers, and retention. Fiscal and budget data are collected at the district level.

Additional data on new teachers should be provided by the Teaching Performance Assessment (TPA) required by SB2042. Funds recently have been provided through SB1209 to the institutions to implement the new assessment but not all institutions are administering the TPA, or the alternative developed PACT. The data from these assessments are maintained by the institutions.

While teacher preparation programs that are members of NCATE are setting up their own databases to track their graduates, these efforts are hampered by the lack of an integrated state data system as the institutions of higher education must obtain data from the school districts in which graduates are employed.

The LAO, the Center for the Future of Teaching and Learning (2004), and other groups have recommended that the state establish a comprehensive data system for the collection and analysis of teacher workforce information. Such a system would permit the tracking and analysis of patterns of recruitment, retention, assignments, and performance, permit the evaluation of various pathways into teaching, and comply with state and federal reporting requirements. The current fragmented system does not meet the needs of policymakers, teacher preparation programs, or employers.

One effort, however, that goes a long way to realizing the goal of a comprehensive data system is Cal-PASS. Cal-PASS is an initiative that collects, analyzes and shares student data in order to track performance and improve success from elementary school through university. In January 2003, the project received a grant to implement Cal-PASS statewide. It is supported by the Governor and the Legislature with ongoing, systemic funding.

Over 2,000 elementary schools, high schools, community colleges, colleges and universities, from over 25 counties, are already participating in this partnership. Each participating institution signs an agreement to provide data once a year, and then appoints a representative to gather and access data. This data focuses primarily on student transcript information, such as courses, grades, and outcomes. To ensure confidentiality and consistency with FERPA (Family Education

Rights and Privacy Act) guidelines, students' social security numbers are encrypted.

Cal-PASS demonstrates that data across regions and different sectors of the education system can be integrated, although it does not yet link student and teacher data..

## **Effective Engagement of Arts and Sciences Faculty**

Stronger collaborative working relationships between arts and sciences faculty and teacher education faculty and greater involvement of arts and science faculty in the preparation of new teachers could help teacher education programs strengthen the content knowledge of their graduates. While California's current policies do stress the importance of teacher subject-matter expertise, they offer institutions limited support and weak incentives to strengthen the relationships among the separate faculties responsible for subject matter and professional preparation.

The state's certification requirements and accreditation standards aim to strengthen teacher content knowledge by more closely aligning preparation of teachers with student learning standards. The CCTC has reviewed all of the licensing standards and examinations to ensure they are aligned with the academic-content standards for students. Both multiple-subjects candidates (elementary) and single-subject candidates (secondary) must complete approved subject-matter programs or pass subject-matter examinations. And the CCTC's accreditation standards and procedures require that institutions show evidence of collaboration between arts and science faculty and education faculty in the preparation of teachers. However, since teacher education in California was moved to the post-baccalaureate level in 1970, it is generally still separated from the general-education and

subject-matter preparation that occurs at the undergraduate level. Furthermore, many candidates complete a major portion of their general education in community colleges; thus, real collaboration around the content of the subject-matter preparation of teacher candidates is hard for most institutions to establish.

With the exception of the limited number of “blended” preparation programs permitted by recent law, collaboration between content and pedagogical studies must generally occur across separate institutional levels and, often, across different institutions. CSUN and Stanford both have made enormous strides in this area by involving arts and science faculty in program design and planning, by supporting new content pedagogical courses, and by encouraging co-teaching across departments. However, much remains to be done to develop the integrated study of content and teaching methods across the state.

In a 2004 report, the Center for the Future of Teaching and Learning called for improving the preparation of teachers by strengthening articulation agreements between community colleges and the California State University system and by expanding collaborative and blended preparation programs. Since a high percentage of the state's teacher candidates obtain much of their subject-matter coursework in community colleges as well as in universities, strengthening these relationships and the alignment of course content with the K-12 academic-content standards is critical.

## **Conceptualizing Teaching as a Clinical Practice**

The third TNE design principle calls for placing increased emphasis on teaching as a clinical-practice profession. From this perspective, teacher candidates should be

placed in clinical settings (e.g., schools and classrooms) with master practitioners as soon and as often as possible to directly hone their skills in assessing student needs and designing effective curriculum and pedagogy. University faculty, along with expert practitioners, should support and guide novices during these experiences and integrate academic preparation with the clinical experience. And institutions with strong conceptions of teaching as a clinical practice should develop residency or induction programs and take responsibility for improving the performance of beginning teachers.

Both CSUN and Stanford have entered into partnerships with local districts to support clinical training and induction, and both operate their own professional-development schools. Much like teaching hospitals in medicine, the professional-development schools initiatives greatly strengthen the quality of the clinical experiences that candidates encounter—and their connection to university coursework. By working closely with specific schools around curriculum development and school reform as well as new- and veteran-teacher training, it is possible for universities to help develop state-of-the-art practice and state-of-the-art teacher education simultaneously. At these sites, student teachers directly experience the practices they learn about in their courses, which are sometimes co-taught by university and school practitioners.

In addition, the professional-development schools serve as sites for research and as demonstration sites for successful methods of teaching students who are traditionally underserved in public schools. Stanford has helped to start new schools, including charters, to serve as professional-development school sites, while also working with existing schools that are committed to teacher education. As mentioned earlier, CSUN with LAUSD has

piloted three clinical sites and a new high school. These sites allow the campus to do what, for now, it cannot afford to do in every one of Los Angeles' 500 schools: observe and teach a cohort of credential candidates almost wholly on K-12, where teams of teachers, education professors, and arts and sciences professors collaborate.

In some cases, the professional-development schools also serve as sites for developing new induction models, creating opportunities not usually supported through BTSA. This state-mandated and funded induction program is operated through local school districts, which can provide the program directly or choose an approved provider. There typically is not a clear role for higher education. Institutions of higher education can operate induction programs but they must comply with the BTSA standards and seek approval from CCTC. Even if they are approved, they are not eligible to receive state funding. They can enter into partnerships with districts and provide some elements of the BTSA program. But the incentives for higher-education institutions to get involved in induction could be strengthened.

Stanford has created a partnership with the Silicon Valley New Teacher Center to provide mentoring support for new teachers in its professional-development school consortium. Through this partnership, the New Teacher Center trains mentors in the professional-development schools, while Stanford supervisors provide additional subject-specific supports for new teachers. Similarly, CSUN has partnered with LAUSD, with the cooperation of the teachers' union, to establish a joint-induction program that culminates in a master's degree. The program provides, during enrollment and after graduation, mentor support; and it bridges the gap between university curriculum and district lesson-planning that often frustrates new teachers.

Ultimately, learning to teach well—especially in challenging contexts—is a matter of combining knowledge about teaching with the opportunity to practice under the close supervision of expert cooperating teachers and mentors. Top-flight training in professional-development schools and support for early induction are strategies that can greatly strengthen the clinical preparation of prospective teachers and help them become highly competent much sooner in their careers.

To be maximally effective, these efforts need to be guided by a clear vision of good teaching that informs the coursework and mentoring beginners receive. In SB 2042, the California Legislature called for strong clinical preparation to be developed through a teacher performance assessment of entering teachers managed by local preparation programs. SB 1209, passed in 2006, establishes a timeline and plan for funding this requirement. One version of the required teacher performance assessment, or PACT, has been developed by a consortium of colleges and universities. The participants, now numbering more than 20 institutions, include Stanford and several other private institutions, all of the University of California campuses, and several CSU campuses, including CSUN.

Grounded in the state's teacher performance expectations, PACT is a portfolio assessment much like that offered by the National Board for Professional Teaching Standards for more experienced teachers. Conducted toward the end of the student teaching or internship, PACT requires that prospective teachers plan a unit of instruction and teach several days of lessons, some of which are videotaped, including offering daily commentaries about outcomes of the lessons and plans for adjusting the next day's work to support student learning. The candidate collects and analyzes student work to examine learning for different kinds of learners, and reflects on how

the unit would be changed when re-taught. A key component of the overall activity is attention to the development of English-language proficiency and academic language in the discipline, as well as disciplinary understanding.

Over the last several years of pilot tests, the PACT performance assessment has been implemented with several thousand prospective teachers, scored reliably, and subjected to content validation. Programs receive summaries of their candidates' scores by subject area and by teaching task (planning, instruction, assessment, reflection, and academic language.) Both prospective teachers and teacher educators who have completed surveys about their experiences report that PACT is a powerful learning tool, shaping improvements in teacher education.

Cooperating teachers, mentors, principals, supervisors, and faculty involved in scoring PACT also report that it informs and improves their ability to support teacher development, as it clarifies what teachers are learning, doing, and aiming for in their practice.

## **Supporting, Sustaining, and Spreading the TNE Reforms**

State policies in California regarding teacher licensure, program standards and accreditation, and beginning teacher induction generally are consistent with the TNE redesign principles and the work underway at CSUN and Stanford. However, to sustain and strengthen these efforts and to spread these ideas across the state, a number of issues require attention by state policymakers and leaders of state systems and institutions of higher education. Here are five major issues that should be addressed.

**Creating accessible, comprehensive, and integrated data systems.** Currently institutions of higher education are unable to

obtain from the state data about where their graduates are teaching or to link data about their graduates to the results of the students in their classrooms on state tests. This makes it difficult for teacher preparation programs to collect the evidence they need to evaluate the effectiveness of their programs and make improvements. The fragmented state data systems, the lack of standard teacher identifiers, and concerns about privacy and misuse of data are the primary barriers in addition to the cost of developing an integrated data system. Leadership can foster an environment in which data-sharing, under the auspices of researchers who can disentangle program and pathway effects from the mesh of other variables, becomes the norm. Then both teacher preparation and policy can rely on California evidence.

**Regulation of General Education Content in Community Colleges.** TNE calls for the active engagement of arts and science faculty in the preparation of teachers to ensure that teachers have deep knowledge of the subject-matter content their students are expected to master. It is difficult to obtain and sustain this kind of collaboration within a single institution. CSUN and Stanford both are making great strides towards developing this kind of engagement, but it is not yet clear if it can be sustained. However, it is even more difficult to obtain the desired alignment of content and collaborative when most of the teacher candidates receive their subject-matter training in community colleges. CSUN is attempting to develop a collaborative with some of the community colleges that send students to its teacher preparation program, but state policies that require and support such collaboration would be helpful.

**Supporting Professional-Development Schools.** Clinical education is substantially strengthened when universities work in close collaboration with professional-development

schools that offer state-of-the-art education for both students and teachers. Some states, including Maryland and North Carolina, have supported the development of professional-development school collaborations on the part of all universities training teachers, just as all medical programs are supported to provide training in teaching hospitals. In recent years, NCATE has developed standards for professional-development school partnerships. The development of both standards and funding for such relationships would greatly strengthen clinical preparation across the state. Particularly useful would be the development of high-quality sites in high-need communities, with incentives to staff such schools with expert mentor- teachers working in collaboration with universities committed to supporting high-quality school design and curriculum. Teachers trained at these sites would become confident, competent, and committed to working where they are most needed, creating a new leadership cadre for urban and poor rural schools.

### **Investing in Teacher Performance**

**Assessment.** Another aspect of improving clinical practice is ensuring that teacher learning—and that of faculty, supervisors, and cooperating teachers—is guided by performance expectations that match the state’s standards and help teachers develop hands-on skills. Current paper-and-pencil tests of basic skills and subject matter do not reach all the way into the classroom to help teachers learn to teach, or to evaluate how well they do so. The state’s newly required teacher performance assessment, including the well-researched PACT assessment, could make a difference in the quality of both teacher education and teaching, if it is adequately supported. The Legislature has yet to establish funding levels for public and private institutions. Depending on the scoring model used (e.g. local or regional), estimates range from \$250 to \$400 per candidate. This is a

relatively small investment for a substantial payoff in greater skill on the part of teachers and meaningful accountability for teacher education programs.

**Providing a Clear Role for Institutions of Higher Education in Induction.** At present all teachers must participate in BTSA programs, and funding for these programs goes to school districts. TNE encourages institutions to provide support for their graduates after they are employed. The provision of incentives to institutions and districts to collaborate on the provision of BTSA could lead to more efficient use of resources and more effective support.

**Learning from the TNE Sites.** What can be learned from the experience of CSUN and Stanford? Given the independence of institutions of higher education and the autonomy of faculty, what mechanisms could be created to take advantage of the investment made by Carnegie Corporation of New York and other foundations to demonstrate the efficacy of these redesigned programs? Are there implications for new accreditation standards? Could funding be provided to support a consortium of institutions that are working on TNE-supported initiatives like PACT or professional-development schools? How can the state best capitalize on the tools being developed at these two institutions and the lessons they are learning about reforming teacher education?

## Resources for Additional Information

California Department of Education  
<http://www.cde.ca.gov/>

California Commission on Teacher  
Credentialing  
<http://www.ctc.ca.gov/>

Stanford University  
<http://ed.stanford.edu/tne/>

California State University at Northridge  
<http://www.csun.edu/tne/>

California Legislative Analyst's Office (2006,  
April). *Modernizing the functions of the  
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Retrieved July 2006 from  
[http://www.lao.ca.gov/2006/ctc/ctc\\_042706.pdf](http://www.lao.ca.gov/2006/ctc/ctc_042706.pdf)

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*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.*

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