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# Teacher Education for Tomorrow

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The National Council for the Accreditation of Teacher Education (NCATE) has launched a process to transform how teachers are prepared to meet the “urgent needs” of America’s public schools. NCATE’s Blue Ribbon Panel on clinical preparation is developing both principles and actions needed to ensure that the next generation of teachers embodies teaching as a practice-based profession for the 21<sup>st</sup> century. In this paper I outline the urgency for change as well as major issues facing teacher education and the policies needed to ensure qualified, well-prepared, and effective teachers for every student.

## The Urgent Case for Change

In a widely discussed 2001 article, ed-game designer Marc Prensky argued that 21<sup>st</sup> century students “do not just think about different things, they actually think differently.”<sup>1</sup> Researchers are documenting how members of the emerging iGeneration – born in the last 10 to 15 years and raised on mobile technologies, virtual reality games and social networks – process information in ways unlike their parents and even their older siblings.<sup>2</sup> Today’s students are not only learning differently, they are also becoming more diverse. Our nation’s public schools are experiencing rapid increases in the enrollment of racial minorities, notably Hispanics and Asians.<sup>3</sup> Schools are also serving more and more students of poverty, and the economic recession has created an even wider gulf between the “haves” and “have-nots” in our society. A 2005 census report estimated that 22 percent of U.S. children are living in poverty (a child poverty rate that is 50 percent higher than in the early 1970s).<sup>4</sup> Over three million Americans are homeless, one-half of them children.<sup>5</sup> Full-service schools, like the well-known Harlem Children’s Zone, where the academic curriculum is embedded within social services and health care support networks, are increasingly needed for teachers to teach effectively and students to achieve at high levels.

At the same time, in the flattening, interconnected world of the 21<sup>st</sup> century, American students must learn much more than the 3Rs of reading, writing and math (and a smattering of science and social studies) now demanded of them by last-century standardized tests and top-down school accountability systems. The rules and tools of No Child Left Behind have reinforced an overreliance on traditional measures of

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student achievement and promoted a cautious curriculum and a timorous teaching style. Since the imposition of NCLB, scores on the National Assessment of Educational Progress (NAEP) have been “disappointing,” with only marginal improvements at best.<sup>6</sup> Between 2007 and 2009, no improvements were made in fourth grade reading. And the proportion of eighth graders scoring at or above “proficient” in 2009 was only 32 percent.<sup>7</sup>

Now the Obama Administration has set a much higher bar: post-secondary readiness for all high school graduates and the creation of new assessments that push students to meet rigorous and globally competitive academic standards. The Administration’s \$4.35 billion Race to the Top initiative places a premium on recruiting, developing, rewarding, and retaining effective teachers and principals and turning around our lowest-performing schools, and on processes to be supported by sophisticated data systems that objectively measure progress and hold educators accountable. The President’s blueprint for reforming the Elementary and Secondary Education Act (ESEA) proposes to advance these principles even more. The leadership and support of America’s most successful teachers will be critical in developing and implementing programs in this new era of reform. For example, as Linda Darling-Hammond has noted, the Administration’s planned \$350 million investment in an internationally benchmarked achievement test will require “intensive teacher engagement throughout the assessment process” if the data are going to be used to drive major changes in teaching and learning.<sup>8</sup>

In the emerging workplace, most students – not just an elite few – must be able to find, synthesize, and evaluate information from a wide variety of subjects and sources. The continued exponential growth of knowledge in many fields, especially in science and mathematics, poses new challenges for teachers to keep abreast – and undermines worn-out notions of the need to “cover” content defined by a classroom textbook and an overly prescriptive set of curriculum standards. Recently there has been a lot made of new recruits needing better training in executing generic classroom routines – e.g., the media fascination with Doug Lemov and his 49 lock-step, content-free techniques for managing students and maintaining high expectations of them.<sup>9</sup> But teachers will need far more than suggested by Lemov. There is much more to effective teaching than specific skills such as using a “strong voice” (#38) and “normalizing error” (#49) as well as the “cold call” (#22) in order to get students college-ready. Cognitive scientists have made it clear as to what it takes for teachers to develop the subject matter and pedagogical expertise to enable all students to reach high academic standards.<sup>10</sup> Most recently researchers are demonstrating how teaching, even fractions in the elementary grades, is extremely specialized, calling for teachers to be more deeply prepared in content-specific pedagogy.<sup>11</sup> As Ball and Forzani note, “Doing well at mathematics in school, for example, does not readily equip one to understand or be interested in others’ mathematical thinking or to understand solutions in multiple ways.”<sup>12</sup>

In fact, our nation’s 3.4 million teachers will need to know far more than deep content knowledge and specific pedagogies for teaching subject matter, which is often ignored in many of the nation’s teacher training programs, both traditional and alternative ones alike (even high profile ones like Teach for America). In *TEACHING 2030*, a new book I have penned with 12 classroom experts, we point to specific skills teachers need to possess for the schools of today and tomorrow. For example, teachers must be prepared with the ability to find and adapt new technologies to engage iGeneration students – as well as work across traditional subject area lines to broker 21<sup>st</sup> century project-learning opportunities for them. They must be able to use data and evidence to inform their practice and possess the skills to work in both virtual learning environments and brick-and-mortar schools. Increasingly so, special preparation will be required for teachers who work in online schools<sup>13</sup> and

those who collaborate with community-based organizations and work in “hub schools” with wraparound services for students and their families.<sup>14</sup>

In the future, teachers will need to go well beyond behavioral or cognitive psychology and the debate between “memorizing the facts” versus “constructing your meaning” kinds of learning. New technologies can empower well-prepared teachers to synthesize a multitude of Internet tools for teaching – co-mingling text, images, audio, video, simulations, and games in ways reflective of how re-wired students develop and use knowledge. Teacher education programs, both traditional and alternative, must fully employ those same tools as they work with New Millennium teaching candidates.

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Developing a results-oriented teaching profession for the iGeneration inevitably will mean huge shifts in thinking and action on the part of policymakers, practitioners, and the public. For much of teaching’s past, policymakers have either encouraged universities to prepare as many teachers as cheaply as possible or allowed school districts to hire under-prepared recruits in the face of shortages.<sup>15</sup> It is imperative that we transform both the current rigid approaches to traditional university-based teacher education *and* the “anything goes” approach to alternative certification.

New policies and resources must be focused on developing and applying teacher knowledge – and away from haphazard recruitment, preparation and induction; superficial evaluation; and anachronistic compensation systems.

## The Teacher Education Context of Today

Debates continue to rage among analysts and researchers over how much preparation is needed before novices enter the classroom and what skills and competencies should be mastered for a new recruit to be deemed qualified and licensed to teach. The popular media often portrays teacher education as irrelevant. For example, *New York Times* columnist Nicholas Kristof has argued that there are no special skills picked up in teacher training courses, only “snake-charming” ones.<sup>16</sup> These charges are not new. In fact, education schools have long been ridiculed as “puerile, repetitious, dull, and ambiguous.”<sup>17</sup>

Today, in claiming that teacher education does not matter, self-proclaimed reformers and journalists often point to a handful of studies showing that new recruits from short-cut alternative certification programs performed as well as or slightly better than those who matriculated through traditional university-based approaches.<sup>18</sup> These studies gain the public spotlight in part because they affirm the conventional wisdom that whatever teachers need to know about teaching they can learn on the job. But a close examination of one of the most oft-cited reports found that its sample of Teach for America recruits actually had more practice-based teacher preparation, mentoring, and pedagogical coursework than the particular sample of traditionally prepared teachers to whom they were compared.<sup>19</sup> And other studies have shown that alternatively trained teachers who had very limited pedagogical coursework before they began to teach actually *lowered* their students’ achievement scores during the course of the academic year.<sup>20</sup>

Over the last five years, the State of Louisiana has developed a Value-Added Teacher Preparation Model that can estimate the impact that different preparation programs have on student achievement.

The model revealed that some teacher education institutions are more likely than others to recruit and develop teachers who are more effective.<sup>21</sup> However, researchers have also found that there is often more variation *within* universities and non-profits that prepare teachers than among them.<sup>22</sup> And there is still no mechanism in place to clearly document *how* the more effective programs better prepare new recruits and *under what conditions*. All too often teachers are prepared for a singular context that does not match the realities of what they face once they begin as the teacher of record.

A 2005 synthesis of teacher education research by a panel of the American Educational Research Association did not clearly point to the superiority of any particular program structure (e.g., four-year undergraduate program, a fifth-year post-baccalaureate program, or alternative program).<sup>23</sup> The panel did indicate that, under the right conditions, certain strategies used in preparation programs, such as case studies and teaching portfolios, can yield positive outcomes for teachers and their students. Increasingly, evidence points to a relationship between the quality of certain aspects of the training – especially the student-teaching experience and how well the clinical preparation is tied to relevant pedagogical coursework – and the newly minted teacher’s impact on student achievement.<sup>24</sup>

In fact, a recent National Research Council (NRC) study concluded that the “current paucity of data and well-targeted research [on teacher education] severely limits the capacity of policymakers and the education community to draw conclusions about which approaches are effective and how to design better ones.”<sup>25</sup> However, the panel’s conclusion does not mean that there is no distinct path to effectively preparing teachers before they enter a classroom as an independent teacher of record.<sup>26</sup>

For example, a 2008 examination of evidence on teacher education by the National Bureau of Economic Research found that teachers who had more extensive clinical training (including a full-year internship) before they began to teach produced higher student achievement gains.<sup>27</sup> In a study of both traditional and alternative pathways into teaching, the researchers – using a large and sophisticated database – found that teacher education programs that produce higher student achievement gains (at the end of their graduates’ first year of teaching) had the following characteristics: (1) extensive and well-supervised student teaching, with strong “congruence” between the training experience and the first-year teaching assignment; (2) opportunities “to engage in the actual practices involved in teaching” (e.g., lesson studies with colleagues); (3) opportunities to study and assess local school curricula; and (4) a capstone experience in which action research or data-focused portfolios are used to make summative judgments about the quality of the teacher candidate.<sup>28</sup>

Of course, many recruits today do not have access to programs that prepare new teachers so thoroughly (at a higher cost). With over 1,200 education schools and 600 alternative providers, there is a lot of variation in how teachers are trained as they enter teaching. There are more than enough teachers being “produced,” in absolute numbers, for the vacancies at hand. However, there is a serious lack of resource management and quality control in the supply chain, especially in light of the need to prepare teachers more deeply in clinical settings.

## Major Issues Facing Teacher Education

There are at least eight major issues facing teacher education that must be addressed in order to prepare new recruits for 21<sup>st</sup> century teaching careers.

1. *Haphazard production*. Currently, university-based education schools produce about 170,000 graduates annually;<sup>29</sup> however, only 70 percent of those actually enter teaching.<sup>30</sup> One reason is the mismatch between production and market demand. Most universities offer just about every kind of teacher education major, irrespective of the local needs of area districts looking for new recruits. In some “teacher surplus” states, universities graduate far too many teachers prepared

for subjects and areas in low demand (e.g., elementary, physical education, social studies), while math, science, and special education vacancies continue to frustrate school leaders as well as parents.<sup>31</sup>

2. *Weak clinical support.* While most education schools desire to more deeply prepare new recruits, their universities rarely fund the extensive clinical training typically required and supported in other professions (e.g., engineering, architecture, and nursing). Historically, policymakers have funded teacher education below the average of other university departments, and generally *far below* the level of most other professional preparation programs.<sup>32</sup> In fact, presidents and provosts have often used education schools as “cash cows,” generating revenue that is funneled to more favored academic or professional programs.
3. *Skewed faculty priorities.* University reward systems primarily value professors who conduct academic research and publish in peer-reviewed journals. Decades ago John Goodlad warned policymakers and university presidents of the overwhelming press for publishing that has contributed to an incoherent education school curriculum – with some classes taught by “disconnected” faculty and others taught by low status adjuncts.<sup>33</sup> This is not a system designed to prepare effective teachers for 21<sup>st</sup> century classrooms.<sup>34</sup> While some of the nation’s universities do draw on P-12 classroom experts, including growing numbers of National Board Certified Teachers, very few are systematically utilized – or elevated to a status as teacher educators where they can be highly influential in the preparation of new recruits for the public schools.
4. *A collaboration gap.* Differences in how universities and school districts are funded and governed limit the possibilities for a continuous, high-quality teacher education experience that bridges pre- and in-service preparation and professional development. University and P-12 leaders often compete for the same funds – resources that, if efforts were combined, could strengthen connections between how teachers are recruited and prepared for specific school districts and how they are developed, assessed, and rewarded once they begin teaching. With university and P-12 faculty often segregated by policy and tradition, education schools tend to ignore the mechanics of teaching in order to train more well-rounded teachers, and school districts ignore cutting-edge research emerging out of universities that could help teachers lead long-lasting curricular reforms. Shared resources tend to promote shared interests.
5. *Missed opportunities with universities.* All too often today, fueled by misconceptions in mass media, public policy is beginning to devalue the role of universities in preparing the next generation of teachers. As the work of teaching professionals becomes more complex, not valuing universities is a missed opportunity. Universities can bring a great deal of intellectual capital and pragmatic supports to the transformation of teacher education and school reform. For example, the arts and sciences faculty (e.g., math, science, sociology, etc.) can contribute cutting-edge research and new content knowledge to both teacher candidates as well as practicing educators. And professional school faculty (e.g., engineering, health sciences, social work, etc.) can work with both prospective and current teachers in providing much-needed wraparound services for students and families in high needs schools. While the Long Beach Unified School District has developed a remarkable partnership with California State University-LB, both public

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policy rhetoric and actions of today discourage institutions of higher education from investing more in teacher education.

6. *Isolated and under-publicized trailblazers.* A growing number of teacher education programs – such as those at George Washington University, Stanford University, University of Chicago, and the University of Pennsylvania – have actually created new urban schools in partnerships with school districts and community organizations “to demonstrate state-of-the-art practices and to serve as training grounds for teachers.”<sup>35</sup> And under the auspices of the Teachers for a New Era (TNE) initiative, the University of Virginia (one of 11 universities involved) launched unique efforts to engage the arts and sciences faculty in teacher preparation and follow and support its graduates who teach in local schools. A number of TNE institutions assembled substantial evidence on the effects of the program on P-12 learning, but none of the data could be aggregated across sites and marketed to a skeptical public. These universities remain the exceptions, not the norms for the enterprise. And these trailblazing efforts in teacher education, while growing steadily, are not well-known by policymakers and the public, making it all the more difficult for their innovations to become part of the national policy conversation that ultimately produces new funding and replication.
7. *Hazy conditions on alternate paths.* Alternative programs now produce over 60,000 new recruits annually, often in sync with district needs. There are high-quality alternative programs that are built on “careful selection, purposeful preparation, and intensive mentoring and practice teaching,” and some have proved “successful in preparing mid-career recruits from other fields.”<sup>36</sup> However, most alternative certification programs offer only a few weeks of training before recruits become the teacher of record – and only a small proportion offer significant and sustained mentoring.<sup>37</sup> In addition, state controls over alternative recruits are generally weaker than for traditional ones. The 2010 “Quality Counts” report from *Education Week* found that 18 states do not require alternative recruits to pass a basic skills test before entering teaching – and 15 do not even require tests in their subject matter. Thirty-five do not require alternative candidates to pass written tests in subject-specific pedagogy. And none require clinical experience.

It is true that alternative recruits from programs with tight links to school districts often get a decent dose of teaching mechanics and classroom management techniques. But they also often lack the higher order pedagogical skills needed to reach diverse students. Frequently, their vision of teaching practice is limited to the school district *curriculum du jour*, and they are far more likely to leave teaching sooner than their more traditionally prepared counterparts. The replacement costs of early departures from teaching are estimated at about \$15,000 to \$20,000 per teacher who leaves (and these figures do not include the costs of reduced student learning).<sup>38</sup>

8. *Residency potential under-exploited.* Urban Teacher Residencies (UTRs) have emerged as a potential “third way” approach to recruit and prepare teachers for high needs schools, but they have not yet been embraced as a reform strategy worthy of large-scale investments. Residency programs typically offer a paid, one-year internship under the tutelage of expert, trained mentors to recruits willing to commit to teaching for four or five years. UTRs bridge the best of both university-based and alternative preparation programs and are modeling how to get serious about specialized preparation for high needs schools. Drawing on approaches similar to medical education residencies, UTRs seek talented individuals who are recent college graduates or mid-career professionals and train them to become effective teachers and change agents. In Boston and Denver, residents are expected to specialize in both content and either second language learners or special needs – and to commit to teaching in Title I schools.

Unlike professional school reforms of years past, UTRs are driven by the needs of districts, not universities, and typically train new recruits for specific school communities. UTRs serve as an antidote to both traditional colleges of education that ignore in-depth hands-on training and to alternative certification programs that short-cut preparation.<sup>39</sup> Early results suggest these reforms are paying off for student achievement and teacher retention.<sup>40</sup> But with costs exceeding \$50,000 per recruit,<sup>\*</sup> most UTRs are funded in piecemeal fashion, drawing on philanthropy as well as a hodgepodge of federal grants. Like the PDSs of yesterday, no sustained funding model has yet been developed for UTRs – and no substantial efforts are underway for developing high quality clinical preparation for teachers in our nation’s rural communities.

## Teacher Education Policy For Tomorrow

While the national media has had a mostly negative influence on advancing the teaching profession, some accounts of teaching and teacher education have painted a more true-to-life image of today’s enterprise. For example, Amanda Ripley’s [What Makes a Great Teacher?](#) in the *Atlantic Monthly* and Elizabeth Green’s [Building a Better Teacher](#) in the *New York Times Magazine* both present teaching as a complex job. Despite a limited research base, they also point to perceived strengths and weaknesses of traditional university-based teacher education and alternative certification – and to their respective effects on teaching practice and student achievement. Ms. Ripley recognizes the powerful recruitment tools used by Teach for America to identify promising new teachers and also highlights the story of a traditional education major who has learned how to teach effectively over time.<sup>41</sup> In her narrative, Ms. Green considers the tools used by Teach For America and university-based education faculty to prepare teachers for high needs schools. Drawing on new research, Green dismantles the common misconception that successful teachers have some “natural-born genius” for the work, describing how effective teachers develop “deliberate technique(s)” that can be taught by others. While both authors attempt to be fair-handed in their analyses, neither explores the kind of policy infrastructure and clinical training (both physical and virtual) needed to create robust preparation programs for teachers in tomorrow’s schools.<sup>42</sup>

In building a 21<sup>st</sup> century teacher education system, I propose five major policy focus areas:

*Reallocating and Fusing P-12 and Higher Education Funding:* Too many universities prepare too many of same types of teachers while university and school district budgets artificially disconnect the recruitment, preparation, induction and professional development of teachers. State and federal policies should reward IHEs and school districts that fuse their budgets for teacher education – providing more funding for those who prepare teachers based on market demand and who are committed to support the in-depth clinical training required for 21<sup>st</sup> century teaching. Both federal and state governments should develop disincentives for

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<sup>\*</sup>Includes funds for stipends, tuition, mentors, and relevant school-based coursework

universities to prepare teachers who are not needed, meaning presidents and provosts can no longer use education schools as “cash cows.”

In addition, fused funding should be used to develop joint faculty appointments among universities and school districts with the aim of spreading teaching expertise from one sector to the other. Fused funding should also be used as a means to forge strong links between student teaching (and other clinical) placements and new teacher induction programs. The ultimate goal should be to create a replenishing pool of expert teachers who have been identified and trained as coaches, mentors, and peer reviewers. In all instances, the needs of students and schools should be at the forefront of policy making.

*Building and Rewarding Broad-Based Partnerships for Teacher Education:* While P-12 and higher education services are often not in sync, they are both also unconnected to the social and health care services essential to serving both students and their families well.<sup>43</sup> If teachers are going to teach effectively inside the context of a comprehensive community program (e.g., the Harlem Children’s Zone), then federal legislation is needed to promote new partnerships across all the entities that serve school-aged children in high-need communities. For example, the reauthorized ESEA could fuel partnerships of school districts, universities, and non-profits as well other agencies to use Title I, Supplemental Educational Services (SES), and other funding streams such as 21<sup>st</sup> Century Community Learning and Child Care Development Funds to link services for students and the clinical preparation of teachers in community-based organizations. Granted, federal efforts such as those operating as a part of the Full Service Community Schools Act are important breakthroughs, but as some researchers have suggested they “are not sufficient to push (out of school) learning from the shallows into the mainstream of education reform.”<sup>44</sup>

The federal government could identify and reward the most effective programs that “blur the lines” of pre- and in-service training. New public policy could offer, much like what is found in the health professions, financial incentives for partnerships (think teaching hospitals) to fuse the resources and concentrate the focus of school districts, universities, and community-based organizations.

*Fully-Paid Residencies for High Needs Schools:* No other nations with whom America competes support short-cut routes into teaching. Nations like Finland and Singapore, highlighted as exemplars, recruit top talent candidates into teacher education programs and train them extensively while expecting them to teach for a substantive career. The federal government needs to play a role in paying for specially prepared individuals to teach and ultimately lead in both high needs urban and rural schools. By funding teaching residencies jointly, universities and school districts as well as community-based organizations are more likely to work together. These *service scholarships* would cover a full year of preparation, paying recruits as residents who work in specially funded “clinical” sites under the supervision of expert teachers. In return, the new recruits, who are cultivated and supported in small cadres, would agree to remain in teaching for at least five years (a minimum number for turning around low performing schools). The federal government could provide 20,000 service scholarships at \$60,000 each for a total cost of \$1.2 billion – a modest investment compared to Race to the Top and other national programs, which support a jumble of less than coherent teacher effectiveness reforms from state to state.

*Performance Assessments to Drive Change:* To drive more coherent teacher education reforms from one school community to another (and to transcend the debate over traditional versus alternative training), the federal government must invest in teaching assessment systems that go far beyond the crude instruments in use today. These sophisticated assessments would use multiple measures of teaching effectiveness to identify teachers’ strengths and determine when they are ready to teach

independently. As a result, some teachers would earn their initial license sooner than others based upon performance data – gathered over time in electronic portfolios – that include value-added student achievement data, analyses of student work, and videotaped teaching performances, as well as student engagement data. Public policy must advance the use of teacher leaders, e.g., an elite corps of National Board Certified Teachers or other classroom experts, who will be directly engaged in identifying effective practitioners through this portfolio process, which will also include evidence of a new recruit’s leadership potential.

This work is already beginning to emerge. With the Performance Assessment for California Teaching (PACT), new teachers are expected to demonstrate their knowledge of content and how to teach it in real life circumstances and contexts. PACT, drawing on some of the assessment protocols of the National Board for Professional Teaching Standards, is now spreading to other states. Proven as a valid measure of individual teacher competence, the PACT design is useful for teacher licensure and can be a powerful tool for teacher learning and program improvement.<sup>45</sup> The assessments require teachers to demonstrate that they know how to effectively teach diverse students – e.g., by showing how they teach specific content to second language learners and analyze achievement data on the progress students make. And the PACT can be used as one of several interlocking tools for creating longitudinal markers in order to identify effective teachers over their careers (and for use in tiered licensing as well as performance pay systems).

*New Technologies & Incentives to Identify & Spread Best Practices:* Good ideas in education often do not

go to scale – not so much because teachers, administrators or university faculty do not want to advance improvements, but because they do not know enough about the ideas to spread them.

Another reason is that trailblazing classroom and school practitioners are often isolated from their less ambitious colleagues.<sup>46</sup> The same is true among teacher educators. New tools will allow teacher education programs, traditional and alternative, to track their graduates to determine where they teach and to some extent how effective they become as teachers. But even the highest hopes for linking teacher and student data and tracing it back to training programs will only go so far in identifying and spreading best teaching practices.<sup>47</sup> Analyses of videotaped teaching – used in cutting edge alternative programs (e.g., Teacher U) and traditional programs (University of Michigan) – need to be expanded exponentially. Learning how to

teach fractions to fourth graders at an education school in North Carolina does not have to be different than doing so in an alternative route program in California. Using streaming video and a host of Web 2.0 tools, the same modeling, images, student work samples, and results can be reviewed by countless numbers of teacher education candidates across the nation, anytime and anywhere. The federal government should underwrite a clearinghouse of best practice videos, with incentives for universities, school districts and non-profits to work together to assemble artifacts and tools – spreading teaching expertise across the nation. Teacher.TV and Teachscape have created powerful models upon which this idea can be built.

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In addition, national accreditation not only needs to focus more on outcomes that teacher education programs produce, but also on those specific partnerships that do the best job in recruiting, preparing, and retaining effective teachers for high needs schools. Given the increasing volatility of school staffing patterns, education schools of tomorrow will need to re-train those who are reassigned to different subjects and grade levels. Those programs that prepare and support teachers most effectively deserve special designation and documentation so others can more readily emulate them. In this vein, the federal government, with research and development investments, could identify (and then reward) highly effective programs that prepare teachers who are needed by school districts and remain in the classroom for at least five years, leading school improvement reforms.

## Conclusions

Current teacher education programs – both so-called traditional and alternative – are at best preparing teachers for late 20<sup>th</sup> century schools – not ones filled with second language learners and students who are growing up in a Web 2.0 world. A re-conceptualized system of teacher preparation, built on a new generation of policy-fueled partnerships and performance assessments, can offer opportunities for individuals from many backgrounds to enter teaching through different routes while also promoting the spread of effective teaching and the identification of our most expert teachers – all in support of transforming teaching into a *practice-based profession* for the 21<sup>st</sup> century.

New policies are needed to fuse the finances and work of P-12 schools, higher education, and CBOs around teacher preparation and development. We must reward those partnerships that produce effective teachers who stay in teaching long enough to make a difference in the lives of students and their families. Lines between pre- and in-service training must be blurred – an aggressive policy tact that the federal government could take. National accreditation must be more aggressive as well, with stellar programs elevated that produce the teachers schools need – and low performers shut down. New technologies can help make these efforts more visible. And performance assessments can help teacher development partnerships determine when new recruits are ready to teach – and set the stage for more comprehensive evaluations of teachers and teaching over time.

Finally, the federal government must take a stand on seriously preparing effective teachers in clinical programs at no cost to the candidate, provided they teach for more than just a year or two. But doing so will require more from our nation's schools and policymakers and administrators who hire teachers: They must insist on hiring the best and paying them handsomely – and not shy away from empowering them to prepare and influence the next generation of recruits for tomorrow's classrooms.

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