

TeachNY Advisory Council

Report of Findings and Recommendations

May 2016

SUNY The State University of New York

Submitted to New York State Education Department
in compliance with Contract Number M002371

Message from the Chancellor



The confluence of technological advancement, a diversifying population, and widening economic gaps has changed the way we live and work more profoundly than anything humankind has ever known. In every sector we are striving to adapt, to keep up, and to thrive.

In education, we don't have a moment to waste. From pre-kindergarten through college, institutions and systems must be able to ensure that every single student who leaves their doors does so prepared to succeed in whatever comes next—in school, in work, in life. This promise to prepare *all* students is the social contract we must make good on. It is what is necessary for humanity to flourish.

Unfortunately, where once, and for a long time, the United States was first in the world in educational attainment, in 2016 we are in eleventh place. Fortunately, *we know what we need to do to improve the current outcomes*.

Through the many changes and challenges schools face, one thing remains constant: *Teachers are the number one in-school factor for student success.* So the urgent need that must be met is this: Produce more excellent teachers. Legions of them.

New York State has a wealth of expert teachers, but how do we make sure that every teacher in every school at every level has the education and support she or he needs to lead 21st-century classrooms effectively? How do make sure that every student, no matter what zip code they live in, has access to the excellent teaching they need to succeed?

This report provides myriad possibilities to help us begin to answer those questions in full. Here, the TeachNY Advisory Council, assembled to provide a guiding document of innovative teacher education strategies, has produced a deeply researched, specific, constructive set of recommendations that can move New York forward so that teacher preparation becomes the universally rigorous, clinical, and continuous discipline it must be to serve our students and state. It is also our hope that these recommendations will be useful to other states and countries that must meet the educational and economic challenges of our modern world.

TeachNY closely considers how colleges and universities can attract the best potential teachers to the field and retain them once they're in the classroom, how to immerse them in the right education and training, and how to support them throughout their careers so they continuously improve. The TeachNY recommendations take aim at the stubborn gap between P–12 preparation and higher education requirements for success. This report conveys how we can steer potential teachers to high-demand fields. And because we know the best teachers are content-area experts *and* creative, collaborative pedagogical masters, this report underscores that often missed but all-important point and lays out how universities can be sure these are the kinds of teachers we are producing.

The State University of New York took on the challenge of convening the TeachNY Advisory Council for two reasons.

First, we were sure it was our responsibility to do so. We are the largest comprehensive public university system in the nation, developed from the nineteenth-century network of publicly supported teachers colleges, and dramatically expanded in the twentieth century to provide high-quality education to every New Yorker. Teacher preparation is bred into our institutional DNA. Each year we graduate 5,000 students from teacher-prep programs, amounting to a full quarter of the state's

teacher workforce. We teach the teachers, in all fields, who teach the students who come to our campuses and then live and work in our villages, towns, and cities. The quality of the teachers we prepare reflects directly on the quality of our college students. So this is on us; we own this challenge.

The second reason we stepped up is because over the last seven years we have become expert at cross-sector collaboration and problem solving. We at SUNY call this approach "systemness." It's also known as collective impact. Simply put, some might call it teamwork. But what we have learned is that society's biggest challenges can't be solved in silos. It takes collective action to make deep systemic change.

The TeachNY Advisory Council's recommendations draw on the best established research findings, as well as new input obtained in a widely collaborative effort unique both for and to New York State. This report is a first step in a multi-phase process designed to engage all the interested parties in the state to address the critical educational issues we currently face.

The State University of New York is honored and privileged to have launched TeachNY. I want to express deep appreciation to all the members of the Advisory Council. With these recommendations offered for consideration, SUNY will work in partnership with others to a forge a new path forward and develop a new policy framework that affirms our collective commitment to the advancement of the teaching profession.

The United States, and New York State, does not aim to regain educational supremacy for the sake of bragging rights. No. We strive to do better, to be the best, because these are the standards, practices, and outcomes we need to flourish as a society. Our future depends on it.



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Charge to TeachNY Advisory Council

TeachNY is an initiative of The State University of New York to transform teacher and school-leader preparation and development through the creation of bold new policy that will shape the discipline for decades to come.

Each year, SUNY prepares nearly a quarter of New York State's teachers, and New York is a key provider of teachers for our nation. SUNY's goal is to attract, develop, and retain a larger, more diverse corps of highly qualified and uniformly efficacious teachers committed to continuous improvement and excellence in their profession. SUNY must do its part to ensure that all teachers, from novice to expert, can engage in professional development and continuous-improvement strategies that equip them with the information, technology, and resources they need to thrive in their practice, wherever their classrooms may be.

Recognizing that policy is a key vehicle for change and sustaining excellence, SUNY empanelled the TeachNY Advisory Council—a distinguished cadre of state and national thought leaders in the area of educator preparation—as the first step. The charge to the Advisory Council was to think boldly and focus on the classrooms and students of tomorrow in crafting an initial set of recommendations for SUNY's (and others') consideration as it embarks on the development of a new policy framework.

This report includes the findings and recommendations of the TeachNY Advisory Council in five priority areas:

- Recruitment, selection, and cultural competence
- Curricular design, pre-service education, simultaneous renewal, and related partnerships
- Induction, continuing professional development, and teacher leadership
- Evaluation and assessment
- Sustainable infrastructure

This multi-phased effort is supported by a Race to the Top grant, awarded to SUNY from the New York State Education Department, to advance the existing partnership between the two organizations. The expectation is that SUNY's TeachNY policy framework will serve as a model for the state and the country.

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Introduction

"If a child can't learn the way we teach, maybe we should teach the way they learn."

—Ignacio Estrada

The education of a person is a complex task, perhaps now more than ever. Advances in technology and our deepening understanding of learners and learning, together with the change in our economy's predominant business model from manufacturing to one focused more on service and information industries, have put our education system on the precipice of a major transformation. Education based on a manufacturing model—that is, schools producing a standardized product in a given time frame using repeated drills—is not adequate to educate a modern workforce or engaged citizenry. Recent studies indicate that our students are not performing as well as those in other industrialized countries in the areas of mathematics and the sciences (Fensterwald, 2013; Layton, 2013). Student performance must improve if the United States is to remain a leader in a global society.

Nothing better illustrates the inadequate outcomes in U.S. schools than the number of ninth graders in New York State who do not make it through college.

For every 100 ninth graders in New York, only 73 will graduate from high school. Of those 73, only 51 will go directly to college and just 23 will complete their degree on time or close to on time. That's the average. In some upstate urban and rural districts the on-time graduate number is closer to 16 per 100. These figures are startling, considering we know that most middle-income jobs require, and will increasingly require, some form of post-secondary education. This outcome indicates that an unacceptable number of New Yorkers lack the access and support they need to complete and succeed.

Significant changes in the education model—funding, curriculum and materials, delivery of instruction, and educator preparation—are evolving to address the shortfall in education outcomes. A "common core" set of standards focused on problem solving, critical thinking, and inquiry skills is replacing the traditional curricular model based on memorization and regurgitation of facts. The resulting curriculum has added relevance for students and increasingly tilts toward personalized and competency-based learning. Different teaching strategies are being employed to meet the differing demands of an increasingly diverse population of school-aged children (e.g., cooperative learning, project-based activities, differentiated instruction), with an emphasis on providing a meaningful context for learning. Alternative schooling models are developing through charter schools, among other endeavors. School buildings are being redesigned to accommodate new curriculum models, often placing students in collaborative environments rather than in rows of individual desks. Laptops and tablets have begun to supplement books, white boards, and markers. Entrepreneurs and foundations are providing capital for innovations. Demonstrably, education in the

United States is undergoing a long overdue transformation—and at the very heart of it is an urgent need to transform the process by which teachers themselves are educated.

The established literature tells us that excellent teachers are the most important in-school factor in student success. But how do excellent teachers *become* excellent teachers?

Education is a discipline that must be reliably selective, supportive, clinically rich, rigorous, and continuous throughout a teaching career.

All teachers themselves start as students. It is our strongly held position, and the findings and recommendations put forward in this report will show, that education is a discipline that must be reliably selective, supportive, clinically rich, rigorous, and continuous throughout a teaching career. The importance of excellent teaching, because of the quantifiable impact it has on students—tomorrow's leaders, tomorrow's citizens, tomorrow's parents—requires that it be viewed and treated as the most serious of professions. As we often say, one does not put a pilot in a cockpit without many hundreds of hours of intensive training. One does not want a brain surgeon whose only experience is as a general practitioner. A five-star restaurant does not open its door with a chef who has not honed and demonstrated his or her skills over years of practical training. Teaching, as a practice profession, should be thought of as no less demanding and treated no differently than these and so many other professions.

But a transformation this significant, this pervasive—both in mindset and practice—takes time, discipline, funding, and most important, leadership. It requires that an entire education system, from Pre-K to Ph.D., act in a coordinated way heretofore unexercised. All stakeholders—schools, universities, communities, businesses, accrediting agencies, and government—must be viewed as partners and engaged. A vision of a desired end result, a goal, and a plan for getting there must be clearly articulated. The success of the coordinated effort will be measured by the ability of the products, our students, of the transformed education system to actively participate in a global society and economy.

History of Educator Preparation at SUNY

In 1948, The State University of New York (SUNY) became one of the last of the great U.S. state-funded systems of higher education to be created. A product of the post-World War II environment, it owed its establishment to three factors: the work of two special commissions that urged a dramatic expansion of public higher education; the flood of veterans coming home, who through the GI Bill created unprecedented demand for public institutions of higher education; and widely reported discrimination against certain religious and ethnic groups, particularly in professional education, at New York's private colleges and universities. In the environment following a horrific war fought against an enemy that practiced genocide, such exclusion became indefensible.

Although SUNY was not formed until 1948, New York State had publicly supported post-secondary education for over a century, first by funding a number of teacher programs in private academies and then funding single-purpose teacher-preparation "normal schools," first in Albany and Oswego, and then across the state. By the early twentieth century, the number of state-supported normal schools had grown to 11,

and while the curricula offered at the normal schools changed over time, they fit into an educational landscape just below "colleges." In the late 1930s and early 1940s, that changed, with the transformation of the "normals" into "state teachers colleges," which were authorized to offer bachelor's degrees through four-year curricula. In addition, the Regents' postwar plan assigned designated specialties, such as art, home economics, or health and physical education, to each campus.

Within the new SUNY, the state teachers colleges formed the largest single sector in the system, in both the number of campuses and their enrollment. In the immediate postwar period, the colleges experienced explosive growth, driven both by the demands of returning veterans and by the baby boom that created the need for many more teachers. In the early 1950s, the teachers colleges were also authorized to begin offering master's degrees in education.

The next major change in SUNY was driven by Nelson Rockefeller, who had been elected governor in 1959, and his designated chancellor for SUNY, Samuel Gould. Together, they built the modern SUNY, creating four university centers while transforming the teachers colleges into colleges of arts and sciences. Although each college now offered new academic majors and degrees in the traditional arts and sciences disciplines, teacher education remained an important part of their curricula.

By the end of the twentieth century, the SUNY system had grown to its current 64-school size and included 30 community colleges, where an increasing number of undergraduates, including those who go on to become teachers, began their post-secondary education. Today, SUNY awards more than 5,000 undergraduate and graduate degrees each year in its educator-preparation programs (EPP), a number that makes it the largest single preparer of classroom instructors and education administrators in the state.

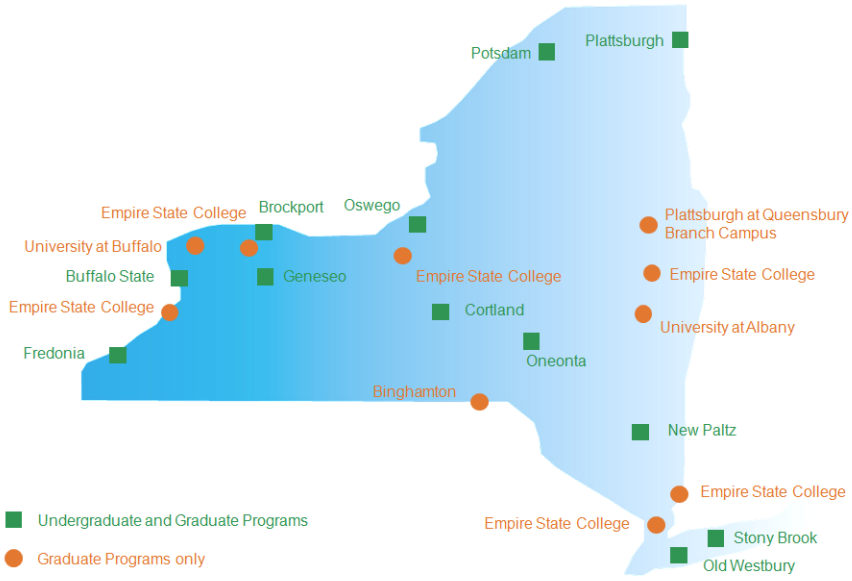
Teacher education, in a real sense, remains at the heart of the SUNY system and an essential element of its service to New York State residents. This commitment will continue in the decades ahead, for there is no greater service public higher education can render than the education of those who will be educators for generations to come.

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SUNY's Role Today: A Leader in Educator Preparation

The State University of New York is the single largest comprehensive public higher education system in the United States, with more than half a million students, 7,000 programs, and over 80,000 faculty and staff members. It prepares approximately 25% of New York's teacher workforce, and, remarkably, New York is responsible for roughly 10% of the teacher workforce in the United States (U.S. Department of Education, 2014). In New York, SUNY graduates are employed in every one of the state's more than 700 school districts. Under the leadership of Chancellor Nancy L. Zimpher, a nationally recognized expert in the field of education and teacher preparation, SUNY is dedicated to educating the next generation of New York teachers and school administrators with a focus on clinical experience to produce top-quality education professionals.

Figure 1 - SUNY Colleges and Universities with Educator-Preparation Programs



The current SUNY educator-preparation policy, *A New Vision in Teacher Education*, has guided educator development since 2001. While the *New Vision* policy included innovations and reflected best practices of the time, a new policy is overdue.

Sixteen SUNY campuses have undergraduate and/or graduate programs leading to NYS certification for teachers and school leaders, and all 64 SUNY campuses contribute to the development of teaching and education in New York State.

The education system—the way we educate all students, and the way we educate students who will become teachers—cannot be transformed without teachers and education leaders who share a vision for schools of the future and the skills needed to realize that vision. The current SUNY educator-preparation policy, *A New Vision in Teacher Education*, has guided educator development since 2001. While the *New Vision* policy included innovations and reflected best practices of the time, a new policy is overdue.

The goal of the SUNY Teacher and Leader Education Network (S-TEN) initiative was to engage higher education faculty and their education partners in the renewal of teacher and school-leader preparation to better meet the needs of today's children.

But while SUNY is a powerhouse of teacher creation, our own research as well as national data show us that the number of people entering the profession is on the decline—this at a time when we need more teachers, and more excellent teachers, at that. Both enrollment in and completion of educator-preparation programs have decreased in recent years in SUNY and statewide. The aims of TeachNY include developing policy that attracts the best students in all fields to the teaching profession, as well as policy that supports students in their development while in school and beyond—when they are in classrooms, continuously developing and honing their teaching skills and content expertise.

In 2012, SUNY was awarded a multi-million-dollar Race to the Top grant from the New York State Education Department (NYSED) to develop and implement a reform initiative that resulted in the formation of the SUNY Teacher and Leader Education Network (S-TEN). The goal of that pioneering effort was to engage higher education faculty and their education partners in the renewal of teacher and school-leader preparation to better meet the needs of today's children. The initiative focused on

four areas of NYS's Reform Agenda: clinically rich teacher and leader preparation, the Common Core standards, performance assessments of pre-service and practicing educators, and data-driven instruction. The SUNY system has been fully engaged in this important work.

In winter 2014, SUNY initiated conversations with NYSED about the critically important role that *policy* plays in sustaining change and ensuring excellence. A new policy framework, the team argued, would enable SUNY and its partners to build on the gains made through S-TEN and Race to the Top funds. Moreover, the time was right for a joint policy initiative, with SUNY's *New Vision in Teacher Education* approaching its fifteenth anniversary. In SUNY, NYSED would have an education-policy partner like no other in the country.

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The TeachNY Project and Process: An Overview

In spring 2014, SUNY Chancellor Nancy L. Zimpher and her team finalized a proposal for a NYSED grant funded through Race to the Top to develop bold policy that would transform teacher and school-leader preparation in New York commensurate with our state's and society's needs. A proposed multi-stage process would begin by engaging state and national education leaders as well as researchers in identifying challenges and best practices for educator preparation, around which a TeachNY Advisory Council, convened by SUNY, would develop recommendations for SUNY and New York.

The project was funded and launched in summer 2014. A *Core Working Group* worked closely with the chancellor to lay out the project's scope and timeline. As proposed, TeachNY would be carried out in three phases, the first to culminate in the Advisory Council's findings and recommendations. The second phase would be marked by full engagement of SUNY—campus and system leadership, governance, faculty, students—and its partners in translating the recommendations into proposed policy for action by the SUNY Board of Trustees. The third phase would be implementation (with targeted, strategic investment) and evaluation.

Immediately following the initial planning, Chancellor Zimpher assembled the TeachNY Advisory Council, a distinguished panel of state and national thought leaders in the area of teacher and leader preparation. Beyond attracting the best and brightest from across the state and nation, the assembled group would represent a range of perspectives that would challenge each other rather than speak in a singular voice. The goal was critical conversation, out of which would emerge general consensus rather than unanimity, about the specific recommendations that would be offered. Council members were carefully selected to represent public and private higher education, P–12 teachers and administrators, school boards, labor, faculty, presidents, provosts, and students. Council members were recruited with the promise that SUNY was inviting them to help develop recommendations on how policy could directly support core priorities focused on achieving sustained improvement in the education of teachers and leaders, along with parallel school renewal. The recurring charge to the Council from the very start and throughout its work was to join SUNY in thinking *boldly* about transformative policy, focusing on the classrooms and students of tomorrow.

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Four all-day plenary meetings of the TeachNY Advisory Council were held during the 2014–15 academic year—in September, December, February, and May—at the SUNY Global Center in New York City. The plenary sessions were webcast to enable expanded participation among NYS Master Teachers and SUNY deans and directors, and all sessions were recorded to allow for transcript analysis for research purposes.

The Council was divided into three Leadership Task Forces (LTFs), made up of Council members and supported by Master Teachers and SUNY System Administration staff. Each had separate areas of focus:

- Recruitment, selection, and cultural competence;
- Curricular design, pre-service education, simultaneous renewal, and related partnerships; and
- Induction, continuing professional development, and teacher leadership.

The LTFs presented their ideas and draft recommendations to the full Council for its consideration. In addition, the entire Council, together with Master Teachers and SUNY support staff, was charged to explore challenges and best practices, and identify recommendations in fourth and fifth priority areas:

- Evaluation and assessment; and
- Sustainable infrastructure.

Between plenary meetings, the LTFs met virtually. With support from System Administration staff, the Council conducted environmental scans for each of the five priority areas, identifying persistent challenges and best practices, grounded in the research literature and practice. The data from the scans were captured in matrices, which then served as organizers for subsequent discussions and the development of recommendations. The Council's findings and recommendations would address SUNY as well as its partners, including NYSED, P–12 educators, and other stakeholders. Beyond the Council itself, additional speakers and panelists were invited to offer their perspectives.

Following the December TeachNY Advisory Council meeting, SUNY hosted a convening of the SUNY deans and directors of education to gain their insights on the recommendations and the initiative overall. The deans provided valuable feedback and continued to be actively engaged in TeachNY work by volunteering to review drafts of the Council's findings and recommendations, and providing key research documents and other resources. While two SUNY education deans represented the group on the TeachNY Advisory Council, all were invited to the May convening.

Policy research and analysis to assist in evaluating preliminary recommendations against a backdrop of other state policies was completed by staff from the Rockefeller Institute of Government (RIG). RIG staff also provided analysis of other state and system initiatives (Gais et al., 2015).

The content of this report—recommendations crafted from a year of deeply researched, collaborative, cross-sector work—is meant to reinvent, reinvigorate, and bring up-to-date educator preparation for all of New York State.

What to Expect From This Report

The content of this report—the recommendations crafted from a year of deeply researched, collaborative, cross-sector work—is meant to inform the development of policy that will reinvent, reinvigorate, and bring up-to-date educator preparation

for all of New York State. This report is not the endpoint of TeachNY, but rather the culmination of phase I and a springboard for phase II.

Moreover, as mentioned at the beginning of this introduction, it is our hope that this work—the process by which the TeachNY Advisory Council was formed, the processes by which it carried out the creation of the recommendations, and the recommendations themselves—will serve as a model for other states and other higher education institutions that prepare today's and tomorrow's teachers and leaders.

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The chapters of this report address that goal, starting with recruitment and retention of excellent candidates in Chapter 1. The recommendations in this area include each teacher and leader candidate demonstrating the ability to succeed academically and professionally in our increasingly diverse classrooms; more effectively distributed and timely information for candidates (and program faculty and staff) about the competencies needed, especially projected teacher shortages, by district, region, and statewide; strategies for substantially increasing the diversity of graduates of SUNY's programs; a concerted effort to dispel myths and misconceptions about the profession and increase the visibility of great teachers; and much more effective outreach to students with both the potential for and the interest in a career in education.

In developing the general model for programs to prepare educators for twenty-first-century schools, the TeachNY Advisory Council and project staff were drawn to literature that predicts what education might look like in the future—in particular, *Forecasting the Future of K–12 Teaching: Four Scenarios for a Decade of Disruption* (Prince, 2014) and *A Transformational Vision for Education in the US* (Convergence Center for Policy Resolution, 2015). Both pieces challenge current practices (e.g., self-contained elementary classrooms) and structures (e.g., educating only within school buildings, chronologically based grades) and suggest that we should anticipate and work toward an education system that is authentic, personalized, and competency-based. The Advisory Council's recommendations in Chapter 2 support this vision and emphasize the need for more flexible and intentional research-based curricular designs; development of regulatory-free zones that enable experimentation and innovation—in curriculum, mode of delivery, and use of technology; more intensive pre-service clinical preparation, including residency programs; and much more effective partnerships with P–20 stakeholders groups upon which excellent educator preparation and research depends.

We should anticipate and work toward an education system that is authentic, personalized, and competency-based.

As described in Chapter 3, SUNY must ensure that all teachers, from novices to experts, can engage in professional development and continuous-improvement strategies that equip them with the information, technology, and resources they need to thrive in their practice, wherever their classrooms may be. The Council's recommendations call for recognition of the continuum of development that characterizes nearly all practice professions; no less than two years of high-quality induction that builds on strong pre-service preparation, for all beginning teachers; differentiated supports and resources for the ongoing development and

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The TeachNY Advisory Council calls on SUNY, NYSED, and New York State to work together to take immediate action to rectify the persistent lack of accurate and timely data to support continuous improvement and excellence across P–20.

credentialing of teachers and leaders, including expanded support for National Board certification; and greater involvement of higher education in the professional development of teachers and leaders, including ample opportunities for collaborative research and deployment of SUNY expertise such as its Center for Online Teaching Excellence (COTE).

In Chapter 4, SUNY's commitment to data transparency and accountability is acknowledged as a strength that should be leveraged, as is New York State's and SUNY's shared commitment to accreditation and high standards. Affirming that accountability is essential for meaningful change, the Advisory Council's recommendations call on SUNY to provide leadership for a comprehensive professional accountability framework—one that befits a mature profession—at both the state and national level; enhanced development of a culture of continuous improvement based on research and analysis; more robust feedback mechanisms with program completers that will inform program revisions; and establishment of a TeachNY Center for Educational Innovation that employs SUNY's research expertise to drive continuous improvement. The TeachNY Advisory Council also calls on SUNY, NYSED, and New York State to work together to take immediate action to rectify the persistent lack of accurate and timely data to support continuous improvement and excellence across P–20. Bold steps must be taken.

Leveraging the state's and SUNY's vast infrastructure will be necessary to initiate and sustain transformation efforts.

Leveraging the state's and SUNY's vast infrastructure will be necessary to initiate and sustain transformation efforts. Recommendations in Chapter 5 call on NYS's education leaders to establish an environment of greater cooperation and coordination; implement braided (or fused) funding approaches to further strengthen the resource base to support teachers and leaders; strategically invest in and support educational research and innovation; regularly communicate about new advances in education and the spectacular achievements of New York teachers and leaders; deploy successful graduates of the NYS Master Teacher Program, by establishing a Master Teacher Academy; and continue to convene the TeachNY Advisory Council to engage internal stakeholders and outside experts from across the country in support of SUNY's educator-preparation transformation efforts.

Foremost in the TeachNY thinking about infrastructure is the notion of *systemness*; SUNY has the opportunity to impact education for all students in New York by focusing its considerable resources on continuous improvement and excellence in educator preparation.

Since it is not possible to determine exactly what changes will result from increases in flexibility and agility in fostering continuous program improvement, it is advisable to adopt a strategy that requires trying out alternative or temporary structures within SUNY and evaluating their effectiveness. Suggestions for organizational development strategies are offered in this report.

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Key Themes

While a cursory review of the Advisory Council's findings and recommendations might lead a reader to wonder what here is new, a closer read will reveal unique features that clearly set this work apart from other efforts in the same vein.

There's no denying that in the vast literature of great ideas about the need for educational reform (see, for example, the American Association of Colleges of Teacher Education and Partnership for 21st Century Skills' report *21st Century Knowledge and Skills in Educator Preparation* [AACTE & P21, 2010], the reports of the Holmes Group [1986, 1990, 1995], and Arthur Levine's *Educating*… monograph series [2005, 2006, 2007]), many similar recommendations appear. In its insistence to start with examining the wide body of research literature, the Council was very intentional, as it was equally intentional in embracing the best, boldest ideas, regardless of the year published. In fact, the repetition of the recommendations in yet another document that, like many others, is extensively research-based, suggests that the transformation of teacher and school-leader preparation for the 21st century constitutes what Heifetz and Linsky (2002) refer to as an *adaptive challenge*—that is, a challenge that requires more than just a few tweaks. More than simply adding a course to cover a new area of pedagogy or a section to cover a new technology, adaptive challenges require a change in values, beliefs, roles, relationships, in fact, in the very way we approach our work.

While attracting and retaining excellent teachers and leaders is a challenge for all New York State, indeed, the entire nation, SUNY is uniquely positioned to address the challenge at an unmatchable scale…SUNY has the capacity to reach into communities to expand the relationships and further develop the partnerships that are necessary for change.

While attracting and retaining excellent teachers and leaders is a challenge for all New York State, indeed, the entire nation, SUNY is uniquely positioned to address the challenge at an unmatchable scale. It has extraordinary breadth in its 64 campuses. Its technology colleges, comprehensive colleges, doctoral institutions, and 30 community colleges are uniquely qualified to together deliver sustained excellence in teacher and leader preparation and professional support. With its geographical distribution across the entire state, SUNY has the capacity to reach into communities in order to expand the relationships and further develop the partnerships that are necessary for change. From introductory courses in EPPs to cognate courses in a wide range of relevant disciplines to research seminars at its university centers, SUNY has the unique capability to address the issues of educator-preparation reform at every level. The breadth and diversity of the system's campuses also allow, in a unique way, for coordinated laboratories of promising ideas, such as the establishment of an Urban-Rural Teaching Corps. The final piece in SUNY's strengths is its chancellor. Dr. Zimpher is one of the nation's leading scholars of education and educator preparation, having worked in Milwaukee and Cincinnati before coming to SUNY. She now is engaged in eight New York cities to create the networks necessary for change on the local level by bringing an area's business, political, and social leaders to the table with one task before them: the attainment of better educational outcomes for the young women and men in that community. Chancellor Zimpher's expertise in and passion for this mission are unrivaled in public higher education.

Beyond SUNY and its leadership are the partnership and commitment of New York State's leadership and citizenry…no other state can match New York's commitment to excellence in education.

Beyond SUNY and its leadership are the partnership and commitment of New York State's leadership and citizenry. From the governor to the legislature, to the Board of Regents and NYSED's new commissioner, to New York State's communities and citizens, no other state can match New York's commitment to excellence in education.

Now is the time to leverage New York's legacy, its record of innovation, its unmatched investment, and to reconsider the infrastructure needed to ensure excellence in teacher and leader preparation and development.

As our Historical Timeline of Education Milestones (p. 11) shows, the Empire State has been a leader in educational reform over decades, indeed centuries, consistently adopting the highest standards for teachers and students alike. Now is

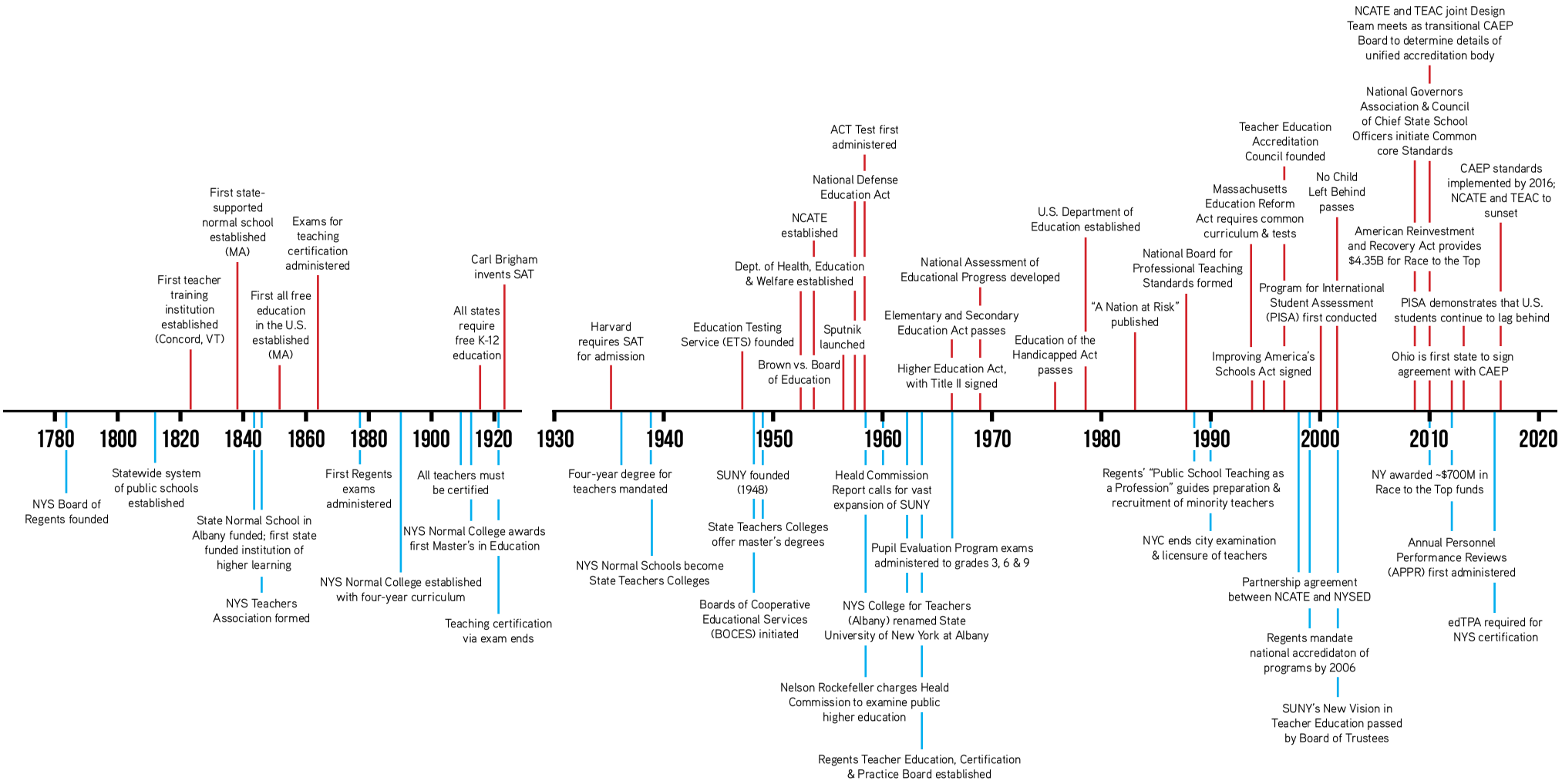
New York State's reputation for complex layered policy and regulation is well known, but working together, we must establish a more balanced regulatory environment.

the time to leverage New York's legacy, its record of innovation, its unmatched investment, and to reconsider the infrastructure needed to ensure excellence in teacher and leader preparation and development. At the summit of our recommendations is the establishment of the TeachNY Center for Educational Innovation—a coordinating structure to more effectively leverage resources and partnerships; promote innovation and excellence in SUNY educator preparation; attract external support and funding; and raise the visibility of SUNY's programs, research, faculty, graduates, students, and partners. New York State should be a magnet for future teachers and leaders, and the policies and practices recommended in this report would make it just that.

New York State's reputation for complex layered policy and regulation is well known, but working together, we must establish a more balanced regulatory environment, one that includes regulation-free zones to spur innovation, experimentation, and system proof points for potential scale up. New York State's vast infrastructure and significant investment in P–12 education must be leveraged and redeployed in a more integrated preschool through doctorate (P–20) fashion, adopting strategies such as braided and fused funding, to train great teachers and bring great teaching to every New Yorker. These are but a sampling of features that distinguish this report from many others.

Recognizing that this report marks the end of phase I and the prompt for phase II, the TeachNY Advisory Council invites a careful read of this document and is eager to help New York State embrace the many thoughtful, transformative recommendations offered here in the spirit of unprecedented collaboration.

Historical Timeline of Education Milestones in the United States and New York State



Chapter 1 – Excellent Candidates

Recruitment, Selection, and Cultural Competence

"Education is the most powerful weapon which you can use to change the world."

—Nelson Mandela

One of the nation's most pressing problems is to find ways to improve the educational outcomes of all students, but the need is most urgently felt among our lowest performing schools. As noted at the outset of this report, for every 100 ninth graders in New York State, on average only 23 will complete a college degree on time or close to on time; in some districts, both urban and rural, the rates of success are considerably lower. Whether the perspective is social justice or economic vitality, this record cannot stand if New York's residents are to live in something other than a deeply divided society, where educational attainment separates social groups by an ever-increasing gulf between those who are capable of participating in the knowledge economy and those who are not.

Educational success is the result of many factors external to schools, such as community wealth and family income, but the single-most important in-school factor is the quality of teaching (Center for Public Education, 2005; Hattie, 2009; Wright, Horn, & Sanders, 1997). New York's and the nation's challenge is clear: We must attract and develop a highly qualified pool of teacher and school-leader candidates who demonstrate both the academic abilities and complex social and technological skill sets necessary for effective teaching and learning in the 21st century. In addition to content and pedagogical knowledge, prospective teachers, teacher leaders, and school leaders need a working understanding of the increasingly diverse communities they are preparing to serve, which can be gained through either lived experience in the communities or curricula designed to foster such understanding.

We must attract and develop a highly qualified pool of teacher and school-leader candidates who demonstrate both the academic abilities and complex social and technological skill sets necessary for effective teaching and learning in the 21st century. In addition to content and pedagogical knowledge, prospective teachers, teacher leaders, and school leaders need a working understanding of the increasingly diverse communities they are preparing to serve.

According to the U.S. Department of Education (2011b), the nation will need 1.6 million new teachers in the next decade to replace those who are on the verge of retirement. While the demand for teachers in New York State is projected to increase between now and 2022, the rate of demand will vary, depending on the grade level and subject. During this time, the overall need for NYS teachers is expected to grow 5.8%, adding more than 17,000 new positions over 10 years—1,700 on average each year. This growth is in addition to the expected approximately 6,750 current teachers who will need to be replaced annually, due to turnover and retirement (NYS Department of Labor, n.d.).

In preparing recommendations for this chapter, the TeachNY Advisory Council examined challenges in building a sufficiently large pool of highly qualified teacher and leader candidates—from a decade-long decline in enrollments and degrees, to a significant mismatch in supply and demand across grade level, subject, and setting, to a teacher workforce that looks less and less like the students it serves. The Council also studied data on public perception of the profession and discussed other factors that might discourage would-be teachers. It took stock of the research literature and examined best practices across the country and internationally

before generating recommendations for policies and practices that will yield a more academically skilled and culturally diverse pool of teacher and leader candidates, women and men who are better prepared to meet the full range of educational challenges facing our schools and our communities today and tomorrow.

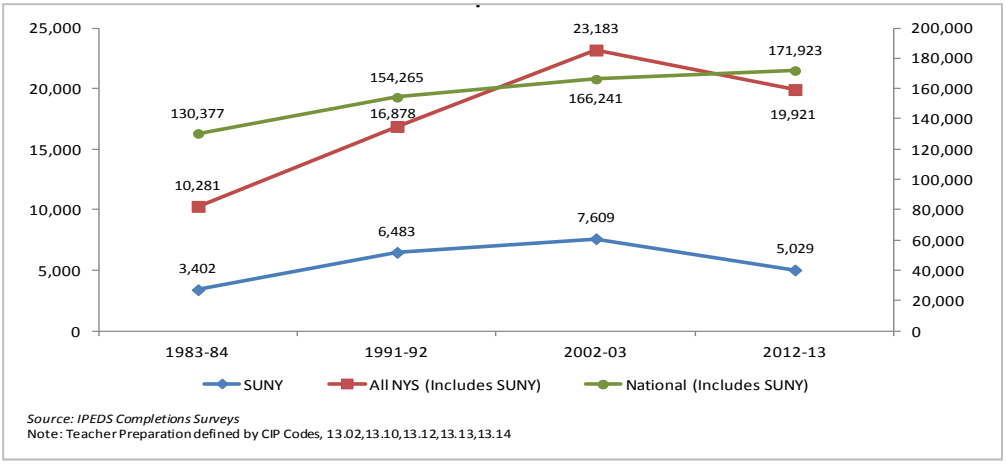
The Recruitment, Selection, and Cultural Competence Leadership Task Force was charged to

- consider policies regarding the recruitment of educator-preparation students, with a focus on diversity and the skills necessary to lead the classrooms of today and tomorrow;
- examine the public perception of the teaching profession;
- provide guidance on the implementation of SUNY's recently adopted policy on admissions criteria for educator-preparation students; and
- review the best practices for candidate retention and completion.

Challenges in Recruiting Tomorrow's Teachers Today

Recruiting students—especially those who possess the academic and personal qualities necessary to become successful educators—is a challenge for higher education, which until recently has operated largely on a "Field of Dreams" principle: build it and prospective candidates will come. In the 1980s and 1990s, SUNY, like the rest of higher education in the state, witnessed tremendous growth in degrees granted in education, and New York State continued to be one of the nation's largest providers of teachers. In sharp contrast, the most recent decade saw significant declines in both enrollment and degrees for the state overall, at both SUNY and New York's independent colleges and universities (see Figures 2 and 3).

Figure 2 - National, NYS, and SUNY Trends in Completion

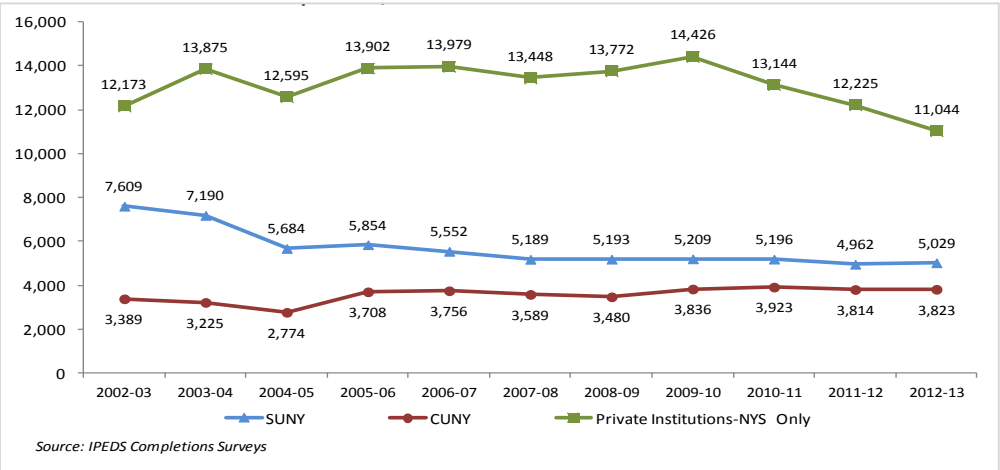


Source: IPEDS Completions Surveys
Note: Teacher Preparation defined by CIP Codes, 13.02,13.10,13.12,13.13,13.14

Figure 3, "NYS Trends in Completions," offers a more detailed breakdown of the New offers a more detailed breakdown of the New York experience, with private colleges dropping by a total of approximately 1,100 degrees awarded annually over the decade, and a more dramatic decline of about 3,400 degrees between 2009–10 and 2012–13. The City University of New York (CUNY) was the only provider in these data to experience an increase over the period, about 430 degrees. Part of the explanation for CUNY's growth is the New York City Teaching Fellows (NYCTF) program discussed

below, which recruits math and science graduates to participate in a summer immersion in education pedagogy followed by enrollment in a special graduate program at the college of their choice, once they have been accepted by that graduate school.

Figure 3 - NYS Trends in Completions



Source: IPEDS Completions Surveys

Though recent employment trends are beginning to shift, with the onset of the Great Recession in 2009, the demand for teachers in many traditional areas—elementary education and non-science/math secondary subjects—tightened significantly, a trend that has been especially apparent in the Northeast and Midwest, regions with little growth in the school-age population. With pervasive sharp declines in state revenues, one of the sectors to feel the greatest impact was education, since the loss of state revenue could only be partially recovered at local levels by increasing property taxes. Consequently, roughly 300,000 teachers and other school employees lost their jobs, and tens of thousands of others graduated from colleges and universities to face one of the worst job markets in recent history. This situation, in turn, had an impact on educator-preparation enrollments, with the largest declines seen in key provider states, including California, New York, and Texas (Evans, Schwab, & Wagner, 2014; Westervelt, 2015).

Even accounting for the recent declines in degrees awarded, SUNY continues to be the single largest provider of educator degrees in New York, and it has an obligation by virtue of its statutory mission and history as a leader in educator preparation to ensure that New York schools have sufficient numbers of highly qualified teachers and leaders to meet the needs of students.

The Advisory Council agreed that the demand for—and the demands on—teachers, and the attraction of the profession have changed dramatically, and the quality and diversity of the pool of candidates seen today are not sufficient for what our schools and communities need. It is no longer enough for higher education institutions to wait for teacher candidates to walk through the door; recruitment must be well-planned and articulated (Luft, Wong, & Semken, 2011). With this in mind, the Advisory Council identified recommendations to address the recurring challenges most often cited in the research literature: public perception, academic excellence, diversity, cultural competence, and supply vs. demand. This chapter addresses each in turn.

The demand for—and the demands on—teachers, and the attraction of the profession have changed dramatically, and the quality and diversity of the pool of candidates seen today are not sufficient for what our schools and communities need.

I. Addressing Public Perception of the Profession

Educators face ever-increasing scrutiny from a range of stakeholders, perhaps most notably politicians, who make essential funding decisions and who have loudly held public school teachers solely responsible for the documented "failures" of U.S. schools. With media simply reporting the charged rhetoric, often without context, one might assume the broader public holds the same perception. If true, that certainly constitutes an impediment to recruitment.

Does the general public share the attitudes that have come to dominate the politically charged public discourse? The data that addresses the question are mixed, to say the least. According to several recent polls, the teaching profession is still among those held in relatively high esteem by the general public (Harris Interactive, 2009; McCarthy, 2014). In other surveys, teachers saw the greatest increase in prestige among *all* the professions between 1982 and 2007 (Corso, 2007). Furthermore, the data gathered from across the globe clearly place U.S. views on teacher status in the middle of the international pack, which is led by China, Turkey, and South Korea. Among European nations, the United States trails only the Netherlands (Dolton & Marcenaro-Gutierrez, 2013). Even more surprising, the *2013 Global Teacher Status Index* (Dolton & Marcenaro-Gutierrez, 2013) reported that teachers in the United States ranked ninth, four places *above* Finland, one of the countries consistently cited as having great and growing respect for educators.

Yet, in the most recent Phi Delta Kappa/Gallup poll, the percentage of U.S. parents who would want their children to become teachers fell from 62% in 2005 to 57% in 2014, and even more telling is the finding that half of high-performing college students believe teaching has become less prestigious over the last decade (Bushaw & Calderon, 2014). The last point is particularly troubling, since the variable most consistently linked to teaching excellence is the teacher's academic or cognitive ability (Lankford, Loeb, McEachin, Miller, & Wyckoff, 2014). Lower levels of compensation with limited opportunities for career advancement and little professional autonomy are among the factors that have contributed to the recent decline in prestige (Auguste, Kihn, & Miller, 2010).

While the profession is still held in relatively high esteem, even in the U.S., it has suffered from a loss of prestige, particularly among our very best students, the very group we need to attract into the profession.

Consequently, the evidence suggests that while the profession is still held in relatively high esteem, even in the U.S., it has suffered from a loss of prestige, particularly among our very best students, the very group we need to attract into the profession.

Recommendations for Addressing Public Perception

1. Working with P–12, New York State, business and industry, SUNY should launch a public service campaign to dispel myths and misconceptions about the profession; raise the visibility of great teachers and great teaching; put a spotlight on the many teacher heroes; and identify the breakthrough research and innovation that are quickly changing the way in which teaching and learning occur.

2. Enlist distinguished teachers at local levels across NYS, especially SUNY alumni in the field, to help identify and recruit promising potential teacher candidates.

II. Recruiting for Academic Excellence

Although there is little agreement on the qualities and characteristics common to excellent teachers, the one exception is "academic ability"—an attribute that has drawn the most direct criticism over the past several decades.

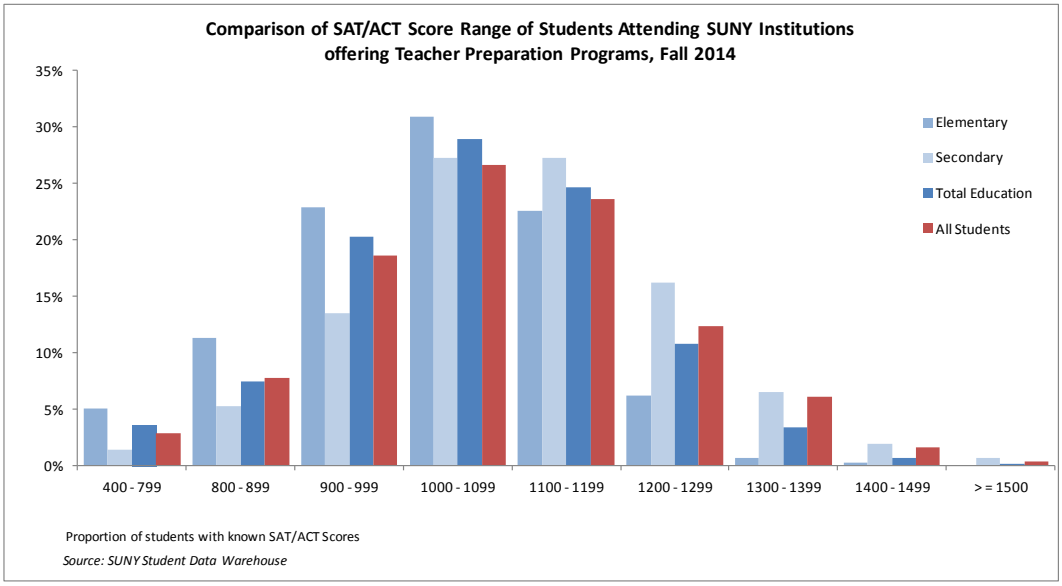
A number of studies and reports have argued that students enrolled in educator-preparation programs (EPPs), especially those seeking certification as elementary teachers, are less academically skilled when compared to other groups of students; that on average they score lower than other students on standardized tests (Auguste et al., 2010; Brenneman, 2015). In comparison to other college majors, the evidence suggests that college students with higher SAT or ACT scores are *less* likely to enter teaching, leaving education programs with pools of lower-performing prospective students (Goldhaber & Liu, 2003; Hanushek & Pace, 1995; Murnane, Singer, Willett, Kemple, & Olsen, 1991). While Levine, in *Educating School Teachers* (2006), offered a more nuanced analysis of the academic qualifications of teacher candidates, he nonetheless concluded that the admission standards for teacher preparation at almost every level were too low, but especially so for those seeking to teach in elementary schools. This issue also received more public attention when the National Council on Teacher Quality (NCTQ) issued its latest in a series of controversial reports critical of teacher-educator programs, charging that too many programs fail to recruit the best students, resulting in more than a third not meeting the organization's standards for student selection (NCTQ, 2014a). Given these arguments, many have called for higher admission standards for entry into the profession (Allen, Coble, &Crowe, 2014; Ripley, 2014).

Closer to home, a recent study of New York suggests that the charge of little academic selectivity in EPPs may be less true today than it was in the past. Using SAT scores from a four-decade cycle, a research group found that in the most recent decade the scores for education graduates and new hires have "improved and in some cases improved dramatically," reversing what had been a three-decade pattern of decline (Lankford et al., 2014).

A recent study of New York suggests that the charge of little academic selectivity in educator-preparation programs may be less true today than it was in the past. (Lankford et al., 2014)

The SUNY data presented in Figure 4, "Comparison of SAT Score Distribution for Education and All Students" appear to further counter the critics who continue to note the lack of academic skill among teacher and school leader candidates, at least to some extent, but they are also consistent with Levine's (2006) and Gitomer's (2007) observation that nationally in comparison to other students, the secondary-education candidates fare much better than do the elementary. When combined together, the SAT score distribution for SUNY education students mirrors the distribution for all students. However, when we separate the education majors into their respective groups, the secondary students have substantially higher scores than their peers, with 80% in the top half of the distribution (at or above 1000) and 53% scoring in the top third (at or above 1100), as compared to 61% and 30%, respectively, for elementary education, and 71% and 44% for all students.

Figure 4 – Comparison of SAT Score Distribution for Education and All Students



It bears repeating that the one quality consistently found among excellent, effective teachers is a record of academic success (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008; Clotfelter, Ladd, & Vigdor, 2007). Nations such as Finland and Singapore have made recruiting teachers from the top ranks of their classes a matter of national policy, and in the past two decades they have achieved remarkable outcomes in student learning. While the need for teachers in New York who are among our very best students is compelling today, it will be even more important in the decades to come. School environments are changing, responding to the broader culture in manifold ways. Tomorrow's teachers will need to be expert at and interested in learning new subjects and will have to become quickly adept at employing new technologies in their classrooms.

The TeachNY Advisory Council acknowledged progress already made in New York State to increase the admissions standards in education programs, including those on SUNY campuses, and strongly supports the higher minimum admissions standards adopted by the SUNY Board of Trustees.

For these reasons, the TeachNY Advisory Council acknowledged progress already made in New York State to increase the admissions standards in education programs, including those on SUNY campuses, and strongly supports the higher minimum admissions standards adopted by the SUNY Board of Trustees in September 2013 for teacher/leader-preparation programs: a minimum 3.0 GPA or equivalent for both undergraduate and graduate programs, or rank in the top 30% of the applicant's high school class (SUNY, 2013b).

In adopting the higher admissions standards, the SUNY Board of Trustees sought to ensure that teacher and leader candidates would, in fact, be among the more successful students. The policy also signals to prospective students that a career in education is demanding and requires many skills. At the same time, the policy helps ensure SUNY graduates enter the profession in possession of a strong academic foundation. Finally, the SUNY standard is compatible with recently revised (February 2015) expectations of the Council for Accreditation of Educator Preparation (CAEP), the nation's accrediting organization for EPPs, which specifies an overall 3.0 GPA for entering cohorts.

In recent years, a number of programs, both inside and outside campus-based EPPs, have been evaluated for their success in recruiting very good students. One that has received a great deal of attention is Teach For America (TFA), which is designed to recruit the most successful students, and through a five-week summer training period bring them into classrooms that same fall. This alternative entry-to-teaching program has succeeded in accomplishing two primary goals: recruiting more successful students and having a positive effect on student learning, especially in some of the nation's most difficult-to-staff schools set in pockets of poverty (Ripley, 2013). However praiseworthy, TFA hardly offers a solution that can be brought to scale, both because of its limited size and more importantly because too few of the students who enroll in the program and who subsequently enter the classrooms, no matter how successful they may be, are still teaching two years later (Boyd et al., 2012). In this respect, many see it as parallel to time in the Peace Corps, rather than entry into a profession.

Other programs offer different incentives—some direct scholarships, others loan forgiveness in marked stages—to attract the best students and encourage them to remain in the profession. Among the more successful, and longest-lived, state programs designed to recruit better applicants has been the North Carolina Teaching Fellows program. Since its founding more than 20 years ago, the program, which offered $6,500/year scholarships on a competitive basis to 500 new program participants annually, has attracted students "with significantly higher academic credentials into the teaching profession" (Henry, Bastian, & Smith, 2012). Moreover, these teacher-students have subsequently succeeded in their classrooms, raising student performance, and they have persisted at higher rates than other groups, even after their obligation period of four years (Henry et al., 2012). Unfortunately, the program has recently fallen prey to cost-cutting by North Carolina's legislature and will not be funded in the future.

One other approach that holds great promise is the UTeach program, which started at the University of Texas at Austin in 1997 as a way to address the demand for science, technology, engineering, and math (STEM) teachers. It recruits students with declared academic majors in one of the core sciences or mathematics into a program jointly designed by the education and STEM faculties. The program has grown to 44 campuses in its 18 years, and UT Austin has expanded the model into non-STEM areas. UTeach features very early placement of students in schools, with "hands-on experience" in all four semesters of the program. Having students prepare three lessons plans in their first semester provides an early immersion with class preparation, which is a real attraction to many students as it gives them the information they need to determine whether to continue pursuing a career in teaching.

UTeach grew out of the conviction that public universities have a profound role to play in improving the public education system. UTeach is an innovative way to recruit undergraduate science, technology, engineering, and mathematics (STEM) majors and prepare them to become teachers.

A number of SUNY campuses have similarly developed patterns of cooperation between and among schools and programs that support both academic majors and educator preparation. At the College at Brockport, for example, students who apply to the social studies certification program are required to complete the certification sequence, a history major, and a special selection of other social science courses, the last two of which have been jointly developed by the education and human development and history faculties. In addition, the history department crafts a joint

recommendation for each applicant. Other campuses, such as Buffalo State College, have brought the two programs much more closely together, with the history department faculty serving as the academic "home" for students in the secondary social studies program, and a member of the department coordinates placements for student teaching.

Over the past three years, in very intentional ways, SUNY has fostered the development of these cooperative relationships through the SUNY Teacher and Leader Education Network (S-TEN), which has brought together administrators and faculty from both education and liberal arts and sciences departments to meet with P–12 teachers and administrators working collaboratively within regions. These existing networks provide a foundation upon which to build stronger partnerships through which successful students in the arts and sciences are actively recruited into jointly conceived programs.

Recommendations for Enhancing Academic Excellence

Recommendation Highlight: **Fully implement the SUNY Board of Trustees' policy on educator-preparation program admissions selectivity and monitor its impact.**

The TeachNY Advisory Council recommends that SUNY:

1. Fully implement the SUNY Board of Trustees' policy on educator-preparation program admissions selectivity and monitor its impact.

Recommendation Highlight: **Develop comprehensive system-wide and campus-specific recruitment strategies by which arts and sciences (and other disciplines) and education faculty and administration share responsibility for attracting strong candidates.**

2. Develop comprehensive system-wide and campus-specific recruitment strategies by which arts and sciences (and other disciplines) and education faculty and administration share responsibility for attracting strong candidates, encouraging excellent students with promise to consider a career in teaching.

- Work with P–12 teachers and leaders to establish teaching academies that inspire and encourage middle and high school students to explore teaching as a career.
- Work with NYS and NYSED to design, develop, and fund a fellowship program for outstanding teacher educator candidates, similar to the North Carolina Teaching Fellows program.
- Make an informational network available to students and advisors that brings together in one place all relevant financial aid information that is designed to support educator preparation, including grants, state and national scholarship programs, subsidized loan and loan-forgiveness programs, and ensure that the information is accurate and widely distributed.

III. Recruiting for Diversity

Demonstrated academic success is the first, but not only, characteristic that we must seek in educator-preparation candidates. For the past three decades, the higher education community has addressed social diversity, in the fullest meaning of the term, and will continue to do so as the United States increasingly moves toward a "minority majority" in the decades ahead. The demographic patterns that emerged in the past 20 years indicate that while one of the fault lines will be between an aging, shrinking white population and a younger, expanding minority population, traditional patterns of residential segregation are likely to continue to decrease (Frey, 2014). Consequently, the classrooms in almost all localities are likely to experience significant growth in the number of students of varying ethnicity, lifestyle, religion,

language, tastes, and preferences, which makes it all the more important for diversity to be a critically important consideration in selecting and preparing educators.

The current depth of the problem is easily highlighted: Approximately 85% of the current U.S. teacher force is by societal definitions "white," while 50% of the P–12 students are young people of color (Maxwell, 2014). Moreover, while the student body is growing more diverse each year, the ethnic and racial composition of teachers has remained relatively constant. The percentage of female teachers in public and private schools also remains high, well above 70% (Snyder & Dillow, 2015), while males comprise roughly half the student population (U.S. Census Bureau, 2011, Table 253).

While the student body is growing more diverse each year, the ethnic and racial composition of teachers has remained relatively constant.

Some scholars refer to these conditions as the demographic imperative, which is defined by three related characteristics of our current situation: the increasing diversity of P–12 students enrolled in U.S. public education; the gap between students and teachers in terms of their lived experiences; and the persistent disparities in educational outcomes between socially defined groups, including students of color, low-income students, and their white middle-class peers (McDonald, 2007).

While the research literature is divided on the impact of gender differences between teachers and students, studies have indicated that the racial and cultural identity of the teacher can make a difference, particularly for students from underrepresented groups (Dee, 2004, 2005; Egalite, Kisida, & Winters, 2015). In addition, teachers of color are also more likely to remain in the very schools that need them most, the urban schools with high proportions of students of color and from low-income families (Achinstein, Ogawa, Sexton, & Freitas, 2010; Villegas & Irvine, 2010).

And there are other significant positive social benefits to increasing the diversity of teachers in our school classrooms. It would provide more role models for all students and offer opportunities for students to learn firsthand about the value of racial, cultural, ethnic, and gender diversity. For some, it will aid learning by reinforcing the value of their own identity; for others, it will serve as a bridge to enable members of the immediate school community to become more engaged in the school (National Collaborative on Diversity in the Teaching Force, 2004). Unfortunately, with little evidence of progress toward achieving a more representatively diverse teacher workforce, we are allowing the roadblocks that have impeded many students to remain in place for yet another generation.

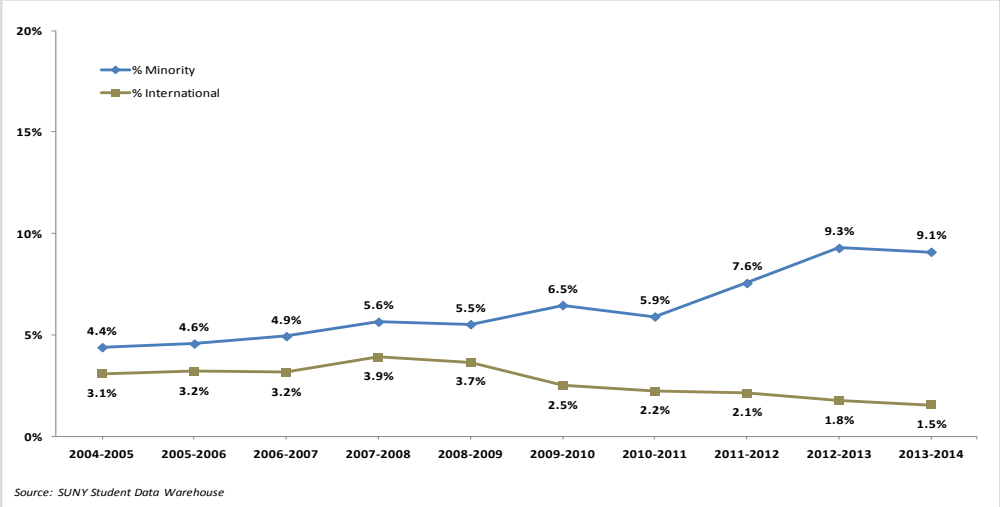
Boston is a city where the disparities are striking and illustrative of the depth of the problem seen in large cities across the country. As Rich (2015) reports, currently in Boston there is just one Hispanic teacher for every 52 Latino students, and one black teacher for every 22 African-American students; in sharp contrast, the ratio of white teachers to white students is one to less than three. Effectively recruiting teachers from historically underrepresented groups can begin to bridge these gaps.

A more diverse teaching workforce is not simply a goal; it is essential if we are to succeed in breaking what has become a deeply entrenched pattern of educational underperformance, especially among urban minorities.

As the country's most comprehensive public system of higher education, SUNY campuses now have several advantages in recruiting a more diverse group of applicants than was true in the past. First, SUNY has made a major commitment to diversity, both on individual campuses and across the system, with a chief diversity officer for the system, a system-wide Diversity Task Force, specially funded programs that offer assistance through mentoring, and a broad infusion of diversity across each goal in the University's strategic plan, *The Power of SUNY*. In September 2015, the Board of Trustees adopted a sweeping resolution on the issue, reaffirming its commitment to making the system the "most inclusive" in the nation (SUNY, 2015c). For its effort, in 2015 SUNY received its fourth straight Higher Education Excellence in Diversity Award from *INSIGHT into Diversity*.

While Figure 5, "Diversity of SUNY Teacher Education Completions," suggests these efforts have shown tangible success in recent years in attracting, retaining, and graduating increasing numbers of minority candidates, the current level is wholly insufficient to address the demographic imperative.

Figure 5 - Diversity of SUNY Teacher Education Completions



The StriveTogether Cradle to Career Network is a national network working to improve education success for every child by bringing together cross-sector partners around a common vision. StriveTogether supports these communities with resources and a collective impact approach focused on aligning existing resources and using data to address local disparities and improve outcomes for all children.

Part of the problem is that there are too few students from underrepresented groups emerging from what many call the "leaky" educational pipeline. In Rochester, for example, the district enrolls 30,000 students, 86% of whom are from underrepresented minorities. It has a four-year graduation rate of 43%, the lowest of any major district in the state, and about half the rate of neighboring suburban districts in the same county. In sharp contrast, Greece, a bordering suburb with a large school district and a growing proportion of underrepresented minority students, graduates its minority students at about the same rate seen for all students, regardless of racial/ethnic status, in the state (NYSED, 2014a). In large part, the explanation is clearly socio-economic, illustrated by the fact that Rochester has one of the highest urban poverty rates in the country, with a child poverty rate that exceeds 50%. The largest upstate city, Buffalo, offers similar data, with desperate poverty concentrated among the minority population, coupled with a current graduation rate of 52%. By comparison, New York City has achieved a somewhat different set of outcomes, with its four-year high school graduation rate of 64%—a genuine problem

to be sure, but one that pales in comparison to where it stood in 2005: 46%. So, it's clear that the issues posed by patterns of underperforming schools and underprepared students are not immutable.

Given this research, the question is: *How can SUNY recruit a more diverse candidate pool and sustain them through to graduation?*

Cradle to Career Engagement

While we have "villages" in New York, it will take more than a village to bring about the changes in education our society demands and needs. Recognizing the depth of the problems with urban education, Chancellor Zimpher has continued the efforts she began in Milwaukee and Cincinnati, working with StriveTogether and EDWorks to lead a major effort to "move the dial," to use her words. SUNY is currently engaged in a number of projects designed to create the infrastructure across the state necessary for change, including sponsoring eight "Cradle to Career" (C2C) networked alliances, with four more planned. Each alliance brings together a broad variety of community leaders dedicated to one purpose: supporting the reforms necessary to achieve better sustained educational outcomes, pre-school through college completion.

SUNY is committed to working collaboratively at every point in the education pipeline to effect change, which in time will result in more highly qualified minority students being attracted to a teaching career. The literature provides evidence of several successful programs. Again, the North Carolina Teaching Fellows program serves as an example. The program has developed a highly effective network of district liaisons who work with teachers and counselors across the state to make sure students are aware of the supports the program offers. The result is not only a higher academic profile of program participants, but a more diverse cohort year by year (Bireda & Chait, 2011).

Educators Rising cultivates highly skilled educators by guiding young people on a path to becoming accomplished teachers, beginning in high school and extending through college and into the profession. The program provides hands-on teaching experience, sustains interest in the profession, and helps cultivate the skills needed to be successful educators.

High School Engagement

In addition, several programs such as *Educators Rising* (Phi Delta Kappa International, n.d.), *Today's Students Tomorrow's Teachers* (TSTT, 2014), and other such teacher cadet/academy programs reach back into P–12 to begin recruiting students earlier in their schooling, either in middle school or high school. Effective programs include a variety of initiatives, such as tutoring and creating special support groups, including high school cadet programs and teacher academies (National Education Association, 2009). And, once the inclination to consider teaching as a profession takes hold, there must be intentional means and experiences by which this interest is fostered. Working closely with local districts and education professionals is a fundamental part of SUNY's heritage, and TeachNY will extend those relationships by working directly with P–12 partners, teachers, and students. This collaboration will be an invaluable asset for recruiting the best-qualified students into the educator-preparation programs.

SUNY Geneseo and New Paltz are partnering with _Today's Students Tomorrow's Teachers_—a regional organization that identifies middle and high school students interested in becoming teachers and nourishes their interest through advising, seminars, teacher shadowing, and hands-on experiences in classrooms.

An extension of this notion would be to work more effectively with current on-campus programs, such as SUNY's own highly successful Educational Opportunity Program (EOP), where economically and educationally disadvantaged students, with

SUNY's Educational Opportunity Program (EOP) provides access, academic support, and financial aid to students who show promise for succeeding in college but who may not have otherwise been offered admission. EOP students may receive support services, such as academic, career, and personal counseling; tutoring; and supplemental instruction.

a large proportion from underrepresented minority populations, are found. Some, including the McNair Scholars Program for first-generation college students, use the mentor model to assist students in their goal to gain admission to graduate programs.

Given SUNY's minimum 3.0 GPA criterion, some of these students may not qualify initially but with appropriate academic supports and mentoring could at the upper-division and/or graduate level. Offering an academic "minor" in education is one way to introduce prospective candidates to the field while at the same time supporting their overall academic development.

Curriculum is the focus of Chapter 2, but there are curricular patterns that would help recruit a more diverse body of students into the EPP applicant pool. For example, a cluster of related courses could be designed that would both satisfy general education requirements and engage the intellectual and experiential interests of candidates. Students might be offered a group of courses that are project-based in school neighborhoods that feature urban sociology, urban economics, and urban history, as one way to fulfill their degree requirements. Open to all students, the cluster could be an attraction to students from New York's cities and inner-ring suburbs—the growth districts for the future. Additionally, a curricular cluster would help all students become more familiar with diverse cultures, better preparing them to teach in these districts. And it would engage the campus faculty in creating new curricular patterns that would engage the entire community in curricular design and delivery, breaking many of the barriers to cooperation across programs, departments, and schools.

Urban-Rural Teacher Corps

An Urban-Rural Teacher Corps (URTC) is designed to serve schools with the greatest needs—those with the least community wealth to support education and the highest turnover of teachers.

A corollary idea is a proposal to create an Urban-Rural Teacher Corps (URTC), designed to serve schools with the greatest needs—those with the least community wealth to support education and the highest turnover of teachers. Some of these outcomes can be addressed if the teacher- and leader-preparation programs focus specifically on the issues—and the unique strengths—that characterize these environments, thereby better preparing teachers for the challenges and demands they will face. To be effective, additional resources will need to be provided by grants from foundations, SUNY, and New York State.

By introducing students to the community's issues through a cluster of courses and, further, by creating alternate pathways to certification for teacher aides and others working in the schools, the URTC would attract more students. The URTC would also generate interest by valuing the cluster of competencies that foster effective teaching and leadership; designing curricula that support the development of greater understanding of, and appreciation for, community values and experience; and integrating the teacher/leader-preparation program with the liberal arts (Howey, 2015b). This is an instance where EPPs can become more intentional about the multiple pathways they offer, and hence, more attractive to excellent students who are seeking meaningful careers in challenging fields where they will be able to make a difference. These pathways should accommodate both early and late deciders who want to pursue a teaching career.

Community College Pipeline

Importantly, SUNY could better utilize its 30 community colleges and their education-related programs. Community college graduates are a rich source of highly qualified students, who demographically are more diverse by age and race than those who begin their studies on one of SUNY's baccalaureate campuses.

In addition, the community colleges are more closely tied to specific regions, local organizations and agencies, including local school districts. Funded in part by the local government, these colleges draw mainly from the schools in the regions in which they are located, and in the last decade they have significantly expanded their programs in education. Their potential importance in educator preparation was recognized more than a decade ago by AACTE, with its publication of a position paper that included a checklist of activities in which it believed its institutions should engage with community college partners (Schuhmann, 2002).

SUNY could better utilize its 30 community colleges and their education-related programs. Community college graduates are a rich source of highly qualified students, who demographically are more diverse…and community colleges are more closely tied to specific regions and local organizations and agencies, including local school districts.

Among the items on the checklist is facilitation of smooth transfer. Fifteen years ago, SUNY faculty began to work on establishing clear transfer paths, the first of which was the Teacher Education Transfer Template (TETT). More recently, SUNY has crafted the largest transfer system in the country. In the 2013–14 academic year, more than a thousand disciplinary faculty from SUNY's undergraduate degree-granting campuses were invited to work together via a new technology platform to identify the knowledge and skills needed during the first two years of study in over 50 transfer paths for specific academic majors, by which students are guaranteed the seamless transfer of credits earned on one campus to another. The work that remains is to ensure that, in addition to the courses identified in education, students are completing the transfer paths in the appropriate academic majors.

SUNY Cortland has initiated a collaborative project with Broome, Tompkins-Cortland, and Onondaga Community Colleges to implement a Universal Prekindergarten Clinically Rich Pilot Project. Faculty members from Cortland and the community colleges have developed focused experiences for students at the community colleges who are interested in or are pursuing careers in early childhood education.

Finally, Open SUNY, SUNY's network of hundreds of programs and tens of thousands of courses offered online, enables place-bound students (including those studying at community colleges) to continue their programs of study at the baccalaureate and master's level without the need to physically move to another campus.

Recommendations for Enhancing Diversity

1. Develop a comprehensive recruitment plan with system-wide and campus-specific recruitment strategies to substantially increase the diversity of educator-preparation students by

- leveraging the SUNY Welcome Center in New York City to substantially increase the diversity of the applicant pool for educator-preparation programs;
- working with P–12 partners, including NYS Master Teachers, to strengthen recruitment and retention strategies specifically designed to enhance diversity;
- bringing to scale highly effective programs, such as Educators Rising and Today's Students, Tomorrow's Teachers (TSTT), which have track records of success with local communities;

Recommendation Highlight: **Develop a comprehensive recruitment plan with system-wide and campus-specific recruitment strategies to substantially increase the diversity of educator-preparation students.**

Recommendation Highlight: **Working directly with regional community colleges, enhance the recruitment and seamless transfer of students into SUNY baccalaureate education programs.**

- developing clusters of courses, such as those in current first-year residential/academic affinity groupings, designed to attract and retain students of color in their first year;
- working directly with on-campus and campus-related programs that effectively serve at-risk and minority populations, such as Upward Bound, the EOP, and the McNair Scholars Program; and
- working directly with regional community colleges, enhance the recruitment and seamless transfer of students into SUNY baccalaureate education programs.

2. Ensure that the financial needs of students with lower socioeconomic status are being met by effectively mobilizing all available campus, state, and federal financial aid resources.

Recommendation Highlight: **Create a pilot Urban/Rural Teacher Corps (URTC) that recruits and selects applicants who are committed to and appreciative of high-needs urban and rural school communities.**

3. Create a pilot Urban-Rural Teacher Corps (URTC) that recruits and selects applicants who are committed to and appreciative of high-needs urban and rural school communities. The curriculum will enhance the development of knowledge, skills, and aptitudes necessary for success in these environments and appeal to students who are committed to working in urban and/or rural districts.

IV. Recruiting and Selecting for Cultural Competence and Other Qualities

The difficulty in both identifying and measuring what many believe to be critically important—the "fit" between a candidate and the profession—is discussed by Allen and associates (2014) in *Building an Evidence Based System for Teacher Preparation*. While the authors urge that one of the three criteria for a rigorous selection among applicants should be a "measure of 'teaching promise' for those accepted candidates," they acknowledge that there is "little research evidence linking specific belief, values, or habits to measures of teaching quality or teacher effectiveness" (p. 8). Despite the difficulties with accurate assessment of these characteristics and beliefs, such evaluations do play a role in both the previously mentioned Teach For America (Dobbie, 2011) and the UTeach admission processes.

A working model may be the Missouri Educator Profile (MEP), which is required of all applicants to Missouri's Education programs. The MEP provides "an assessment of work style preferences used to support the development of effective educator work habits." While not a part of the program admissions decision itself, the questionnaire identifies developmental objectives when a student enters the program that can subsequently serve as the basis for developmental discussions between the student and his or her faculty advisor.

To a great extent, the qualities that make an excellent teacher are learned behaviors, the product of both lived experience and the curricula designed to reinforce dispositions, as the study of the North Carolina Teacher Corps program suggests. In *Building a Better Teacher*, Green (2014) provides a number of examples of effective teaching that result from neither a special, natural talent nor a particular personality type. Instead, she argues that meaningful learning experiences lead students to sets of highly effective learned practices. Similarly, Michael's (2014) work with teachers in her groundbreaking case study demonstrates both the possibilities and complexities

of educating teachers to become more aware of and able to change the racial dynamics of their own classrooms.

Among the skills and dispositions the TeachNY Advisory Council identified as necessary to lead the classrooms of tomorrow were adaptability to serve at-risk students, strength in STEM fields, and a genuine comfort and competence with evolving technologies. Beyond academic performance, the characteristics of the ideal candidate for a successful career in education are widely debated. What additional qualities are important? The Advisory Council suggests that perseverance and patience; multi-tasking abilities; communication skills, both speaking and active listening; sensitivity to the diversity of students, both cultural and learning styles; and the ability to lead others are among the most essential characteristics.

More needs to be said regarding cultural sensitivity to the diversity of students, which, given the current composition of both the teacher workforce and those in the pipeline, really translates into a need to develop "cultural competence." All SUNY EPPs currently address cultural competence in their curricula (see Chapter 2), but, again, the North Carolina Teacher Corps appears to have achieved a measure of success over time. It immerses students in both academic and experiential environments in which they have an opportunity to work through issues of culture and diversity, beginning very early in the four-year program.

Recommendations for Recruiting and Selecting for Cultural Competence and Other Qualities

1. Leverage SUNY research strengths, especially in the area of measurement and evaluation, to develop and implement valid formative assessments of cultural competence and other qualities, and to support the admission and retention of excellent teacher and leader candidates.

V. Supply vs. Demand: Better Alignment with the Educational Market

One of TeachNY's goals is to better match the graduates of educator-preparation programs with the needs of New York State. Specifically, this means educating graduates who are more academically capable; who as a group exhibit greater diversity; who are comfortable dealing with the complexity of cultural values; and who better match the needs of school districts by grade level, subject, and other areas of specialization.

To be clear, the Advisory Council does not support any plan that would limit the choices of certification areas available to student candidates. But two concerns emerged from our discussions: 1) students should be better informed about the market conditions—local, regional, and national—they can expect upon graduation; and 2) shortages in particular areas, such as STEM, bilingual, and special education, present a pressing social issue, one that demands concentrated attention, especially from public universities.

When the labor data are closely analyzed, it becomes apparent that broad categories, such as "secondary school teachers," which includes both high-demand fields (STEM) and fields with very low projected demand (social studies), are not

sufficient. For example, Figure 6 identifies a growing need, both nationally and in New York State, for preschool and special education teachers at all levels. Moreover, the STEM fields will have increasing demand, especially if proposals such as that of New York City to make computer science preparation available to all its students within the next ten years are widely duplicated (Taylor & Miller, 2015).

Figure 6 - Labor Data: Projected U.S. and NYS Demand and SUNY Graduates

Title	U.S. Growth Rate[8]	New York Projections							SUNY Degrees	
		Employment		Change		Annual Average Openings				
		2012	2022	Net	Percent	Total	Growth	Replace-ment	2012-13	2013–14
Preschool, Primary, Secondary, and Special Education School Teachers	**10.4%**	**291,120**	**308,150**	**17,030**	**5.8%**	**8,450**	**1,700**	**6,750**	**4,626**	**4,108**
Preschool, Except Special Education	17.4%	27,390	29,990	2,600	9.5%	1,030	260	770	272	257
Kindergarten, Except Special Education	13%	10,070	10,890	820	8.1%	360	80	280	89	86
Elementary School, Except Special Education	12.3%	85,130	92,070	6,940	8.2%	2,560	690	1,870	1,309	1,104
Middle School, Except Special & Career/Technical Education	12.4%	40,340	43,580	3,240	8.0%	1,210	320	890	687	578
Career/Technical Education, Middle School	5.2%	1,610	1,630	20	1.2%	40	0	40	46	43
Secondary School, Except Special & Career/Technical Education	5.5%	68,100	69,130	1,030	1.5%	1,950	100	1,850	1,462	1,322
Career/Technical Education, Secondary School	5%	5,020	5,070	50	1.0%	150	10	140	26	23
Special Education, Preschool	16.2%	5,770	6,750	980	17.0%	200	100	100	77	72
Special Education, Kindergarten and Elementary School	6.2%	19,180	20,220	1,040	5.4%	430	100	330	421	385
Special Education, Middle School	5.2%	11,280	11,420	140	1.2%	200	10	190	56	52
Special Education, Secondary School	4.6%	16,810	16,940	130	0.8%	300	10	290	122	115
Special Education, All Other	9.5%	420	450	30	7.1%	10	0	10	61	71
Education Administrators, Elementary and Secondary School	**5.7%**	**17,160**	**17,450**	**290**	**1.7%**	**490**	**30**	**460**	**177**	**156**

Source: NYS Department of Labor and SUNY Student Data Warehouse

Can we effectively recruit for those areas in demand? The answer is yes, but we need to adopt more effective approaches, and models provided by many of SUNY's own community colleges may serve as exemplars in this regard.

Given their funding mechanisms (about one-third of the cost is borne by localities) and their close association with regional business needs and labor markets, SUNY community colleges have developed particularly close working relationships with local organizations and agencies, populating numerous campus advisory groups and boards that could serve as models for EPPs. To a significant extent, the demand (or the lack thereof) for teachers will be occurring not on the national or state level, but in localities, and the advisory boards are an ideal way to learn about the projected local and regional demands early enough to plan effectively. (See Chapter 2 for additional discussion on the role of advisory boards.)

Just as advisory boards serve as a bridge between EPPs and localities, the most effective programs in others states have created curricular bridges between education department faculties and their counterparts in the arts and sciences.

For example, the UTeach program mentioned earlier has demonstrated its viability to recruit science and math students. Through special seminars and an early and intensive set of field experiences with mentor teachers, UTeach students graduate with both their academic major and the pedagogical coursework and experiences necessary for teaching success. Recently, the program has been expanded to other liberal arts disciplines, such as history and English. There are two critical elements for

the program: the very early field experiences, and the cooperation that has developed between the liberal arts and science departments and the faculty in the College of Education. Together these faculties have created an integrated approach that has recently expanded to include undergraduate and graduate tracks for UTeach Urban Teachers.

Another university-sited program, Cal Teach, offers distinct similarities to UTeach, including early recruitment of students who are majoring in the STEM disciplines, close collaboration between math and science faculty members and their colleagues in education preparation programs, and early placements in schools. Together, these elements combine to create "pedagogical content knowledge," the kind that is most useful for classroom teachers (Newton, Jang, Nunes, & Stone, 2010).

While both UTeach and Cal Teach might be termed "alternative" programs, they are, in fact, versions of teacher-preparation worked out between the faculties from different disciplines to create new curricular and experiential paths to certification. New York City Teaching Fellows (NYCTF), however, is truly alternative. It grew from the need of the New York City schools to find certified teachers to replace the many uncertified teachers who had been hired under temporary licenses in the 1990s to teach mathematics and other hard-to-staff fields, a practice disallowed in 2002. The result was a math immersion option within the NYCTF program that sought to fill the employment gaps.

According to the NYCTF website, the program has been a smashing success, providing the city with a cadre of bright, capable young teachers. Former and current Fellows are 12% of all teachers, 18% of science teachers, and 22% of all math and special education teachers. The program offered a series of incentives, including reasonable starting salaries during the first year, when students work closely with mentoring teachers; assistance with graduate tuition; and a cohort system in graduate programs, which significantly helped build peer-support systems. It was, and remains, highly selective. By 2008, it had accepted only 15% of 19,000 applicants (Goertz, Loeb, & Wyckoff, 2011). A careful study of the program concludes that the NYCTF-Math Immersion teachers improved student outcomes when compared to the uncertified teachers they replaced, but they did not surpass those who entered from the college-recommended path. They also fell below the smaller number who came through Teach For America (Boyd et al., 2012). An enduring problem for NYCTF—much like TFA—is teacher retention, which is lower than those hired from college EPPs.

***Cal Teach* is a program for undergraduate science, math, and engineering majors interested in exploring a career in education. Students learn conceptual teaching skills and practice these methods in local K–12 classrooms. Cal Teach offers the minor in Science and Math Education, as well as a unique opportunity for students to complete both a degree and a California teaching credential as an undergraduate.**

The *New York City Teaching Fellows-Math Immersion* program offers candidates with an interest in teaching math, but without the state-required bachelor's degree in math, physics, engineering, or statistics, to become certified to teach math in New York City… Math Immersion training sets Fellows up for success by deepening their expertise in the content knowledge and skills they will teach their students. While teaching, Fellows continue to participate in math coursework as part of their master's degree program.

Recommendations for Meeting Market Needs

1. In partnership with New York State, NYSED, the U.S. Departments of Education and Labor, and localities, provide prospective and enrolled students and faculty members with the most up-to-date labor supply-and-demand projections.

- Create advisory boards for all educator-preparation programs to maintain the flow of information on current and emerging local and regional teacher and leader needs.

Recommendation Highlight:
In partnership with New York State, NYSED, the U.S. Departments of Education and Labor, and localities, provide prospective and enrolled students and faculty members with the most up-to-date labor supply-and-demand projections.

Create advisory boards for all educator-preparation programs to maintain the flow of information on current and emerging local and regional teacher and leader needs.

- In partnership with New York State and localities, create pilot programs modeled on the New York City Teaching Fellows program.

Final Considerations

It should be obvious that effective recruitment cannot be divorced from many other issues upon which major reform depends. Professional prestige, cohort identity, material resources, curricular coherence, early immersion in school environments, etc., all play a part in making education a more attractive career choice for bright women and men who seek to serve their society by sharing their love of learning in the environments that enable students to acquire the knowledge, skills, and attitudes they and their communities so desperately need.

This chapter has focused on the challenge of attracting and retaining highly qualified candidate teachers, and in so doing touched only briefly on curricular issues. The next chapter is devoted to full consideration of pre-service curricula.

"The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires."

—William Arthur Ward

This chapter looks directly at the academic and practical preparation of teachers and school leaders, with a particular focus on the design of the curriculum and the structure of pre-service education. Concomitantly, we explore new models of relationships that can bring simultaneous renewal to educator-preparation programs (EPP) and community partners.

In creating the recommendations in this chapter, the TeachNY Advisory Council operated under the premise that the need for change is urgent, with the preparation of new teachers and leaders reflecting subject, as well as demographic, labor market needs. As noted in Chapter 1, the nation will need 1.6 million new teachers in the next decade (USDOE, 2011b). This massive turnover in our educational workforce presents an opportunity to set the direction of the educational system for the next several decades. However, it is imperative that we prepare the next generation of teachers with state-of-the-art knowledge and skills, a commitment to lifelong learning, and ability to lead and manage change.

It is imperative that we prepare the next generation of teachers with state-of-the-art knowledge and skills, a commitment to lifelong learning, and the ability to lead and manage change.

The recommendations of the Advisory Council are based on principles, practices, and research related to developing self-regulated learners; overcoming the persisting duality between pedagogy and content; creating deep, self-sustaining, and multi-faceted partnerships; embracing curriculum development as a collaborative endeavor; and embedding applied-learning experiences throughout the entire course of educator preparation.

The Curricular Design, Pre-Service Education, Simultaneous Renewal, and Related Partnerships Leadership Task Force spearheaded the Council's work on the following tasks:

- Consider policy elements regarding curricular design, including the review and adoption of best practices, alignment to P–12, and the engagement of faculty across disciplines to support educator preparation;
- Examine existing SUNY policy and make recommendations regarding clinical placements generally and options for clinical strategies, innovative partnerships, and partnership agreements for high quality, clinically rich placements; and
- Provide guidance on how to create sustainable partnerships between higher education and New York school districts and schools to allow all students in teacher-preparation programs the opportunity to teach in a high-performing school.

In addressing these specific charges, the TeachNY Advisory Council here sets forth goals and a corresponding enabling framework to support this re-visioning of academic programs that prepare the highest quality teachers and school leaders.

Like many professional preparation programs, however, the curricular components of today's EPPs are the result of a patchwork of requirements put in place by accreditation agencies, state and federal education departments, university administrations, and the profession itself. Additionally, there are reports from organizations, such as the Center for American Progress and the National Council on Teacher Quality (NCTQ), that seek to influence educator-preparation programs by creating new models or reporting on the success of programs in meeting the respective organization's own standards. While the quality of these expectations and reports varies markedly, they contribute collectively to the public discourse on the quality and effectiveness of our educational system.

In the last decade, professions such as medicine and law have been striving to break free of historic constraints, recognizing that the current models of preparation, designed for the past, are no longer suitable. Following in the footsteps of these and other practice professions, educator preparation is in need of significant reform. Numerous reports over the last decade have heralded calls for change within EPPs, raising concerns about low admission and graduation standards, faculty and curriculum disconnected from the reality confronted by practitioners, and research that is often devoid of the diverse social contexts in which education occurs (Levine, 2006). As Mehta (2013) notes, "We are trying to solve a problem that requires professional skill and expertise by using bureaucratic levers of requirements and regulations" (p. 463). Rather than merely examining which bureaucratic levers might need to be adjusted to improve educator preparation, the TeachNY Advisory Council started with the premise that we needed to envision what teacher education should be and then figure out how that vision is to be achieved.

We must think more expansively about preparation program content and experiences so that new teachers and leaders can serve as change agents; better understand the inseparable nature of content and pedagogy, including the use of technology to support deep learning by students; and understand the importance and principles of collaboration and partnership, especially in clinical experiences that support candidate and student learning.

Included here is a set of recommendations within each section, intended to set forth key aspects of this vision and suggestions as to how we might begin to cut through the regulatory spider web that constrains reform efforts. In addition, the added reporting requirements often impose additional costs without conferring commensurate benefits (e.g., timely, accurate data to support continuous improvement). The Advisory Council has concluded that the existing web of regulation and standards (largely from outside the profession) and the accompanying reporting requirements should be streamlined to provide greater heterogeneity in programs and encourage the development of curricular innovation, enhanced clinical experiences, and improved community partnerships.

To move teacher candidates beyond the replication of methods derived from a philosophy of "teach as you were taught," we must

- think more expansively about preparation program content and experiences so that new teachers and leaders can serve as change agents;
- better understand the inseparable nature of content and pedagogy, including the use of technology to support deep learning by students; and
- understand the importance and principles of collaboration and partnership, especially in clinical experiences that support candidate and student learning.

The Advisory Council took into account Goodlad's (1990, 1994) 20 postulates for teacher-preparation programs, which we viewed as a starting point for returning to the basics of high-quality teacher and leader preparation. For example, he asserted, "There must exist a clearly identifiable group of academic and clinical faculty members for whom teacher education is the top priority." In addition, the Advisory Council noted the need to deliberately include technology in the curriculum (D. Johnson, 2013; Philip & Garcia, 2013; Phillips & Popović, 2012; Young et al., 2012) and to change the focus of teaching to "students as creators of knowledge" (Mehta & Fine, 2012), meaning, as explained by Labaree (2000), "A good teacher is in the business of making himself or herself unnecessary, of empowering learners to learn without the teacher's help" (p. 233). The Advisory Council embraced these concepts, and this mindset guided the development of recommendations.

Clinical experiences should be broadened to include experiences in P–12 classrooms and simulated classroom environments… through teaching tools such as case studies, microteaching, and simulations.

Defining "Clinical Experience" in Educator Preparation

In this report, we use a holistic definition of *clinical experiences*—one that moves us far beyond standard teacher-education experiences. *Clinical experience* should be broadened to include experiences in P–12 classrooms and simulated classroom environments, as well as on higher education campuses through teaching tools such as case studies, microteaching, and simulations, rather than being based solely on meeting time requirements in the classroom (Arsal, 2014; Howey & Zimpher, 2010).

Effective clinical preparation of teacher candidates must also include preparation and sustenance of higher education and P–12 clinical education faculty through professional development and ongoing support, as well as formal recognition for the latter (Dangel & Tanguay, 2014). Across New York State, these practices can include the use of experts such as the NYS Master Teachers, teachers holding National Board Certification, and those who have been formally prepared to assume roles as teacher leaders to support both student teachers and mentor teachers within schools. Providing continuing professional development for and by experienced teachers can ensure that a pool of informed, up-to-date mentor teachers will be available to teacher candidates. Formal recognition of this expertise can be strengthened through definition and development of boundary-spanning P–20 roles in teacher- and leader-preparation programs and granting of academic rank to P–12 and higher education clinical faculty.

The preparation of future teachers and leaders needs to be viewed as a collaborative endeavor… there is a need for greater teamwork both *among* higher education departments, schools and systems, and *between* higher education and P–12.

The preparation of future teachers and education leaders needs to be viewed as a collaborative endeavor among the many stakeholders in the education pipeline, including schools, colleges, the New York State Education Department (NYSED), unions, accreditation agencies, and other education organizations. Here we focus in particular on the need for greater teamwork both *among* higher education departments, schools, and systems and *between* higher education and P–12 institutions. Developing these functional relationships will provide for simultaneous renewal across P–20, ensuring that new teachers and leaders understand what is needed in the P–12 environment, that future and current teachers and school leaders receive ongoing and meaningful professional development that encourages them to reflect on their practice and evolve their content knowledge and pedagogical practice over time, and that partners in the preparation of these professionals understand the nuances of the preparation process. These

Education faculty at SUNY Fredonia and Buffalo State co-teach courses with P–12 teachers in school classrooms. The collaboration provides professional development for the course instructors in addition to sharing of information about teaching in today's schools.

partnerships often become more powerful through the inclusion of local businesses and community groups.

Strong partnerships currently exist in many places, including through Professional Development School networks, and these successful practices must be shared and extended.

Such strong partnerships currently exist in many places, including through Professional Development School networks, and these successful practices must be shared and extended. We need to make possible the development of beacon sites where others can come to observe and learn best (evidence-based) practices. These sites can become models for developing partnerships so that teacher candidates, teachers, and school leaders can study effective and emerging practices. A statewide resource repository can make best practices available to all teachers and candidates.

School-university partnerships provide a foundational framework for the collaborative work of preparing new teachers and school leaders (D. Breault, 2013; R. Breault, 2014; Carlson, 2012; Noguera & Klevan, 2010; Vandyck, Graaff, Pilot, & Beishuizen, 2012). While using experiences from successful partnerships can contribute to simultaneous renewal and beneficial sharing of professional experiences, the Advisory Council has also noted that successful innovation and renewal will require support from the highest levels of higher education, P–12 institutions, accrediting bodies, and other oversight agencies.

While using experiences from successful partnerships can contribute to simultaneous renewal and beneficial sharing of professional experiences, the Advisory Council has also noted that successful innovation and renewal will require support from the highest levels of higher education, P–12 institutions, accrediting bodies, and other oversight agencies.

I. Curricular Design

Curriculum design is the core of any academic program and, in the area of educator preparation, should build a foundation of theory and practice to prepare teachers and school leaders who are forward thinking, student centered, and lifelong learners themselves. In this section, we explore the core tenets that the Advisory Council believes should inform the design of the curriculum and identify specific areas that should be considered as SUNY seeks to revise its policy framework for teacher education.

Problem-Based and Case-Based Learning

Teachers and school leaders need to be able to bring together various knowledge and skills to address a multitude of different problems each day. Problem-based learning uses written cases and simulated situations to stimulate inquiry, critical thinking, and knowledge application and integration related to the student's particular academic field or discipline. Through a collaborative, problem-based learning process, students acquire a deeper understanding of the principles of education and, more importantly, acquire the skills needed for lifelong learning that are critical for the ongoing renewal of our teachers and schools. Moreover, problem-based learning activities provide an opportunity to bridge the gap between the content knowledge the students often obtain outside of a school of education and the pedagogical skills gained within the EPP, thus forming a basis for content-based pedagogy.

Clear and Coherent Conceptual Framework

The effective preparation of educators and education leaders requires preparation programs that have a clear and coherent conceptual framework that guides the development of the curriculum and clinical experiences. The conceptual framework should be developed and understood among pedagogical and content faculty, as well

as P–12 partners, and should contribute to a shared sense of mission, collegiality, student identity, and ongoing program renewal.

Educational Milestones

Educator-preparation programs need to develop milestones that signal to students, faculty, and external stakeholders that each student is making meaningful progress toward admission into the educational guild.

These milestones, usually signaling the overcoming of a challenging element in the program, are what sociologists refer to as *shared ordeals*. As Schlechty (1985) noted,

> In an effective induction system, entry into the occupation is marked by distinct stages and statuses. The successful completion of each stage is accompanied by a ceremony, ritual, and symbols. Each status carries with it a distinct set of performances, duties, rights, and obligations. (p. 39)

Such induction systems are evidenced in fields such as medicine and law and in the military, where there is a particular status associated with one's year in school, passage of certain examinations, and, gradually, admission to the profession (e.g., interns and residents in the medical field, doctoral candidates in education). EPPs must develop clearly defined milestones, with associated rituals and obligations, to signal a student's progression toward becoming a professional in the field.

Georgia's pre-service certificate in teacher education provides a statewide milestone that attests to pre-service candidates meeting all requirements for participating in field experiences.

The *TechTeach* program at Texas Tech University uses performance assessments aligned to a set of instructional competencies associated with greater student achievement gains to evaluate candidate performance through a video capture system called Teachscape.25.

Research-Based Curriculum

Educator-preparation programs should provide students with a solid foundation in the theory, analysis, and practice of education in all its forms. Like other practice professions, teachers are increasingly called upon to demonstrate how their craft has been integrated with science—"that their instructional models, methods, and materials can be likened to the evidence a physician should be able to produce showing that a specific treatment will be effective" (Stanovich & Stanovich, 2003, p.3).

Moreover, EPPs need to engage future teachers with problems that arise out of the inevitable incongruities that exist between theory and practice. It is important that theory and practice not exist in silos; the utility of theory is in using it to understand real-world situations. Educator-preparation curricula should include learning outcomes associated with introducing students to the research that underpins good practice, teaching them to be critical consumers of that research, and enabling them to conduct their own research and assessment activities. Colleges and universities are the most appropriate settings to teach students about the integration of teaching and research; their faculties should model such activity and provide students with the skills necessary to do so in their own classrooms

Like other practice professions, teachers are increasingly called upon to demonstrate how their craft is integrated with science.

Educator-preparation curricula should include learning outcomes associated with introducing students to research that underpins good practice, teaching them to be critical consumers of research, and enabling them to conduct their own research.

Culturally Responsive Teaching

Across the United States, the population is becoming more culturally, ethnically, economically, and academically diverse, and it is falling on schools to provide an empowering and equitable education for all.

As such, one of the highest priorities in teacher and school leader preparation is to help prospective teachers and leaders acquire the attitudes, knowledge, skills, and disposition to work effectively with students with diverse backgrounds and experiences. EPPs must assume the responsibility of preparing all teachers and school leaders to be effective in culturally diverse classrooms and schools and enable them to capitalize on the diversity within their specific settings. This responsibility is in addition to increasing the racial and ethnic diversity of the teaching workforce, emphasizing that all educators must be culturally responsive. There has been increasing focus within the profession on this issue of late, and even more needs to be done to ensure that efforts to prepare multicultural and multi-culturally aware educators are systematically integrated throughout the educator-preparation experience.

Figure 7 - Change in Demographic Factors of NYS Public Schools

Academic Year	2008–2009		2013–2014	
Total K–12 Enrollment	2,691,267		2,652,283	
Racial/Ethnic Origin/Percent	**Enrollment**	%	**Enrollment**	%
American Indian/Alaskan Native	13,027	*	15,390	1%
Black/African American	517,997	19%	479,201	18%
Hispanic or Latino	571,699	21%	651,630	25%
Asian or Native Hawaiian/Other Pacific Islander	205,486	8%	234,567	9%
White	1,374,718	51%	1,232,452	46%
Multiracial	8,340	*	39,043	1%
Eligible for Free/Reduced Lunch/Percent	1,245,406	46%	1,348,330	51%
Limited English Proficient	202,220	8%	213,178	8%

*Less than 1%

Source: NYSED Student Information Repository System

Teachers need to have subject-matter expertise and pedagogical skills—and the ability to combine the two so that the teacher can fit the most effective pedagogical approaches to the content and, likewise, know how to construct the elements of the content to help students learn.

Pedagogical Content Knowledge

Teachers need to have subject-matter expertise and pedagogical skills—and the ability to combine the two so that the teacher can fit the most effective pedagogical approaches to the content and, likewise, know how to construct the elements of the content to help students learn. However, nearly 30 years ago, Shulman (1986) observed that teacher-education programs provided limited integration of subject knowledge and pedagogy, often resulting in the prospective teacher not being prepared to integrate the two. This challenge persists today.

SUNY's *New Vision in Teacher Education*, published in 2001, established the SUNY system's education programs as leaders in the development of pedagogical content knowledge by requiring that all prospective teachers complete a major or concentration related to their subject-matter expertise. In many programs, however, students still experience little integration between the acquisition of content knowledge and pedagogical skills. EPPs need to increase participation of liberal arts

and science and humanities faculty in ways that increase integration of these two areas throughout the student's academic experience so that new teachers graduate with the ability to master pedagogical content knowledge.

Technology Integration

Technology is increasingly a part of most aspects of our society, making it important that teachers possess the skills and behaviors of digital-age professionals, including being comfortable as co-learners with their students and colleagues. Indeed, we have moved beyond the idea that teaching can be enabled by technology to the reality that teaching and school management require technology integration—the routine, transparent, and accessible use of technology to support learning outcomes and school operations. Teachers of today, let alone tomorrow, need to be aware of and able to critically assess the utility of new technological innovations, as well as able to adopt appropriate new technologies into their pedagogical practice. In addition, teachers will need to be able to respond to the ubiquity of technology in the lives of students, the rapidity with which it changes, and the ongoing shift away from traditional textbook-based learning aids toward more online and digital modalities.

Teachers of today, let alone tomorrow, need to be aware of and able to critically assess the utility of new technological innovations, as well as able to adopt appropriate new technologies into their pedagogical practice.

Fostering Innovation

Implementing some of the aforementioned design principles may require freedom from the current state of regulations. Indeed, to prepare teachers for the schools of tomorrow, EPPs need greater latitude to pursue curricular innovations to identify better ways to teach our teachers. Although some of this latitude currently exists (e.g., piloting full-year student teaching), it is largely unfamiliar but could be leveraged by working collaboratively with regulators and accreditors to better understand the possibilities for innovation. The Advisory Council recommends that, in addition to making use of currently available "freedoms," new modalities be developed to foster experimentation by education schools, such as those featured in *Deeper Learning* (Martinez & McGrath, 2014), including assessment of those innovations and sharing the results for full public view. It will be critical that results of innovative practices be made available through, for example, the Educator Preparation Repository created as a project of the SUNY Teacher and Leader Education Network (S-TEN) initiative.

Penn State's *EDUCATE* (Exploring Directions in Ubiquitous Computing and Teacher Education) empowers faculty and future education professionals to make critically informed decisions surrounding digital tools that support their teaching, their learning, and their inquiry and scholarship.

To prepare teachers for the schools of tomorrow, programs need greater latitude to pursue curricular innovations to identify better ways to teach our teachers.

Recommendations for Curricular Design

1. Design educator-preparation programs that are guided by a clear conceptual framework; support the mastery of content knowledge and pedagogical skills in an integrated fashion; and have educational milestones that recognize a student's successful performance in academic and clinical engagements. This approach will ensure that candidates develop a strong understanding of pedagogical content knowledge necessary for effective teaching, and have shared experiences that indicate progress through the preparation process. The milestones will signal students' increasing levels of responsibility and, to both internal and external stakeholders, students' progression toward becoming professional educators. SUNY may want to explore some common milestones, such as a statewide pre-service

certificate. In addition, the SUNY system should create general education and content area courses where faculty are recognized and rewarded for modeling cutting-edge instructional practices (project-based learning, innovative use of technology, etc.) that engage college students in ways we expect P–12 teachers to engage children. These practices should be shared across programs and campuses through use of the S-TEN Educator Preparation Repository.

Recommendation Highlight: **Empower campuses to be flexible and innovative so they can schedule and structure classes, labs, and field experiences to make educator-preparation programs more attractive and accessible to diverse candidate populations.**

2. Empower campuses to be flexible and innovative so they can schedule and structure classes, labs, and field experiences to make educator-preparation programs more attractive and accessible to diverse candidate populations. This strategy may include more effective use of summer and other intermediary breaks/terms, developing additional five-year programs leading to master's degrees, and identifying multiple paths to certification without shortchanging candidate preparation. Campuses that do not already do so should create undergraduate education studies minors to provide students not in teaching-focused academic programs a meaningful opportunity to explore teaching as a career path.

3. Infuse experiential learning and analytical skill-development activities to create teachers and leaders who are data-based problem solvers, innovators, and change agents. EPPs should better apply problem-based learning, case-based learning, and experiential-learning opportunities, infused with research and analytical skill development, to transform the curriculum of education schools. Such experiences will ensure that prospective teachers and school leaders are able to master the fundamentals of pedagogical content knowledge, integrate technology into their practice, develop classroom and school-management skills, develop understanding of students' social settings and out-of-school contexts, and operate effectively in diverse classrooms and schools. They would also be able to critically evaluate educational research; design action-oriented, field-based, research-based assessments; and use research to inform their decision making and practice. Programs should also instill an appreciation for previous efforts to foster innovation (e.g., Learning by Real Problems, Big Picture Schools, etc.), analyzing current proposals for innovation and basic theories and practices of change management, and developing skills needed to create and foster innovation in the classroom, schools, and districts.

4. Develop mechanisms to create a shared vision for EPPs and ensure that students have a seamless educational experience between their content and pedagogical areas. This recommendation includes engaging P–12 leaders and educators, liberal arts and sciences and humanities faculty, and school of education faculty to develop standards of shared responsibility and accountability; create shared leadership over budget, personnel, and programmatic priorities; and assess and recognize differentiated contributions of participating faculty and departments. Such efforts may be facilitated by dual content and pedagogical advising; dual content and pedagogical internship supervisors; interdisciplinary teams that focus on the scholarship of teaching and learning; joint cross-department and school-higher education faculty meetings to discuss program design and student progress; and collaborative teaching, research, and service engagements for faculty.

Recommendation Highlight: **Establish experimental education units (e.g., regulation-free zones) that develop and test innovative educator preparation designs.**

5. Establish experimental education units (e.g., regulation-free zones) that develop and test innovative educator preparation designs. This strategy could include competency-based education, simulations, gaming, adaptive learning, blended programs, time-variable instruction, modular programming, technology use, flipped classrooms, innovative staffing, badging, and micro-credentialing. In these zones, both the pre-service teacher and mentor teacher are engaged in deep, collaborative, and experimental learning. The increased flexibility must be accompanied by appropriate accountability to ensure that quality is maintained and rigorous assessment measures used to assess outcomes.

6. Implement teacher-education residency programs. These programs would be similar to what has been developed in the medical field and would provide teachers the opportunity to gain in-depth training within the classroom after they have completed all the other requirements for their degree. The resident teacher would run his or her own classroom, but would be under the supervision of a NYS Master Teacher, a National Board-certified teacher, or a teacher with similar qualifications and recognition.

Recommendation Highlight: **Implement teacher-education residency programs.**

7. Develop and implement high-quality nontraditional pathways and differentiated content-delivery systems to teacher and leader certification that expand access to preparation programs. Such programs and delivery models would attract traditional students, as well as those who have had other careers and or have other responsibilities that preclude them from pursuing traditional pathways delivered through traditional means. Moreover, such programs would help attract potential teachers and leaders who have a diversity of experience and academic preparation. SUNY should also leverage its Open SUNY initiative to expand access to teacher- and leader-preparation programs, as well as develop competency-based education that could be available statewide.

II. Clinical Experiences

Research on expert performance in any discipline highlights the importance of extensive and targeted practice in developing expertise (Ericsson, Charness, Hoffman, & Feltovich, 2006). This axiom is true across all areas of expertise and is especially true within a practice profession like education.

Educator preparation needs to be clinically rich and clinically based…including both in-school and lab experiences.

Educator preparation needs to be clinically rich and clinically based. The NCATE Blue Ribbon Panel on Clinical Preparation outlined ten design principles that support clinically based teacher preparation, including the statement that clinical practice is the core of teacher preparation. It is through clinically based programs that include both in-school and lab experiences that preparation programs learn what schools expect from teachers and future teachers can apply theory and practice (NCATE Blue Ribbon Panel, 2010). According to Howey (2015a),

Rigorous clinical educator preparation involves a continuing array of specific *clinical interventions*… that enable learning to teach in developmentally appropriate ways over time.

> A core assumption is that rigorous *clinical [educator] preparation* encompasses much more than a protracted capstone experience such as a residency in one or more schools. Rigorous clinical educator preparation is rather determined by how a continuing array of specific *clinical interventions*…enable learning to teach in developmentally appropriate ways over time. They ultimately demonstrate the prospective teachers' impact on their students' learning. (p.11)

The Advisory Council asserts that clinical experiences must be integrated throughout the educator-preparation experience, built into course curricula, encouraged through simulated activities, and finally experienced in operational settings where mentors can provide feedback.

Student teachers do not need to wait until they are in front of a full classroom to begin testing their pedagogical skills. Rather, they can begin through microteaching and teaching laboratories. Simulated settings or microteaching experiences benefit future teachers by providing a carefully structured situation in which novices can begin to put their skills into practice, receive immediate and targeted feedback, and then implement that feedback in the next cycle of microteaching (Grossman, 2005). Research also suggests that such simulations can be as effective as field experience for developing teachers' understanding and practice (Metcalf, Hammer, & Kahlich, 1996). Overall, gradually incorporating clinical experiences into the pre-service curricular design boosts future teachers' sense of efficacy, which ultimately will positively impact teacher performance (Arsal, 2014).

SUNY Oswego's School of Education residency program, *NEXT* Teams (Novice-Expert Teacher Teams), emphasizes the importance of co-teaching. For a 30- to 40-week residency, teacher candidates are gradually provided with nearly the same level of responsibility as their mentor teacher in planning, delivery, and assessment.

Howey (2015a) has provided a clear and concise description of clinical educator preparation that is also appropriate for school-leader preparation. As indicated above, clinical preparation refers to a series of experiences that requires students to demonstrate application of pedagogy in increasingly complex situations, from simulations of teaching individual students to being responsible for the instruction of an entire school classroom, all with supervisory support and mentoring. Supervisors provide feedback on performance and require students to reflect on the effects of their instruction on student learning so as to continuously improve performance. The clinical experiences should be integrated with coursework that focuses on discipline content and pedagogy. When applied to school-leader preparation, clinical preparation has the same characteristics—gradually increasing the complexity of leadership situations from simulations to internship as a school leader with increasingly complex responsibilities.

SUNY currently has examples of clinically rich practices developed through the work of the SUNY Teacher and Leader Education Network (S-TEN). SUNY Oswego's School of Education has developed an extensive clinically rich residency program that emphasizes the importance of co-teaching. Teacher candidates are gradually provided with nearly the same level of responsibility as their mentor teacher in terms of planning, delivery, and assessment for 30 to 40 weeks. Called *NEXT Teams*, these Novice-Expert Teacher Teams balance understanding of what teacher mentors need to provide candidates and what teacher candidates need to provide students.

SUNY Plattsburgh at Queensbury's "Clinically Rich Plus" centers are run by teacher candidates, providing them with authentic connections to students and parents, encouraging family and community involvement.

At SUNY Plattsburgh's Queensbury campus, teacher candidates are able to experience working with students in rural, impoverished areas. Family resource centers were established in the Fort Ann School Distrct, encouraging family and community involvement on a semi-regular basis and allowing for engagement between children and parents that might not usually be available due to work schedules. These "Clinically Rich Plus" centers are run by teacher candidates, providing them with authentic connections to families. The centers also offer workshops that provide parents with tools to encourage their children's academic performance.

Recommendations for Clinical Experience

1. Incorporate frequent clinical and field experiences. This strategy includes planning for and receiving feedback from various mentors throughout the preparation experience, from the earliest courses through intensive clinical experiences, possibly including a residency program.

2. Carefully select clinical mentors (preceptors) for alignment with program objectives. These mentors should be employees of partner schools engaged in simultaneous renewal with the EPP. A broad and extensive experience background is preferred; experience in action research is essential.

3. Provide opportunities for pre-service students to engage in simulated classroom environments. This may include microteaching, virtual simulation, live experience, and others.

4. Develop mechanisms to ensure the full engagement of all faculty—P–12, education, and liberal arts and sciences—in clinical experiences and raising the stature of the clinical experience. This approach should include implementing rewards for pre- and post-tenure faculty and should consider granting of academic rank to P–12 and higher education clinical faculty.

5. Leverage SUNY's statewide presence to provide students the opportunity to engage in field experiences in high-needs areas, such as rural and urban districts, using the SUNY Urban Teacher Education Center (SUTEC) model.

Recommendation Highlight: **Carefully select clinical mentors (preceptors) for alignment with program objectives.**

III. Simultaneous Renewal and Sustainable Partnerships

Sustained success in the education sector, through the incorporation of innovative practices into teacher-education program design, can change negative impressions of the profession. By integrating sustainable partnerships into teacher-education preparation, the differing but complementary needs of teacher candidates, public school colleagues, and university faculty become apparent, and the bifurcated world of education can be transformed into P–20 partnerships whose goal is to prepare all students to achieve at their highest level.

Simultaneous renewal is based on the assumption that better schools require better teachers, but we cannot have better teachers unless we have better schools in which teachers learn, practice, and develop. (Goodlad, 1994)

Simultaneous Renewal

The idea of simultaneous renewal is based on the assumption that better schools require better teachers, but we cannot have better teachers unless we have better schools in which teachers can learn, practice, and develop (Goodlad, 1994). Programs that incorporate higher education and P–12 partnerships create contexts for this mutually beneficial learning and reinforce positive outcomes that attract greater participation. Research has shown that revitalization across the P-16 sector establishes a culture of collaboration, inquiry, and continuous growth as all educators share responsibility for all student success (Shroyer, Yahnke, Bennett, & Dunn, 2007; Williams & Shaw, 2003).

Programs that incorporate higher education and P–12 partnerships create contexts for this mutually beneficial learning and reinforce positive outcomes that attract greater participation.

The Buffalo State College Professional Development School Consortium is a true collaboration with P–12 partners and has been in existence for about 25 years. It is now operating in 45 schools, both domestic and international, and has been used as a replication model.

Sustainable Partnerships

Ultimately, simultaneous renewal is achieved by establishing strong, community-based, sustainable partnerships between higher education, P–12 school districts, and other community C2C partners.

In their work dedicated to systemic educational partnerships, Howey and Zimpher (2010) have identified key lessons learned about effective partnerships. These lessons learned include partnerships' developing a clear, mutually agreed-upon mission focused on student success; identifying a correspondingly clear theory of action; emphasizing shared accountability and differentiated responsibilities; exerting strong and shared leadership over budget, personnel, and institutional priorities; and publicly acknowledging and rewarding the contributions of different partners. Moreover, such partnerships need to recognize and respect the distinctive missions, cultures, strengths, and limitations of each partner; develop roles and responsibilities for individuals to span the boundaries of partners; and pursue integrated change strategies that mutually reinforce the shared vision.

Recommendations for Simultaneous Renewal and Sustainable Partnerships

Recommendation Highlight: **Create regional advisory boards…and provide regular and ongoing forum(s) for these boards to convene around educational improvement.**

1. Create regional advisory boards for educator preparation that include P–20, business, and community leaders and representatives, and provide regular and ongoing forum(s) for these boards to convene around educational improvement. With the goal of creating and sustaining simultaneous renewal, these boards should be charged with aligning priorities and resources, determining community goals, and examining workforce trends (within and outside of teacher education) to determine how these findings might guide educators and EPP improvements.

2. Establish and maintain partnerships between school districts, EPPs, Boards of Cooperative Educational Services (BOCES), community organizations, and higher education institutions that provide for activities that support simultaneous renewal. This work would include creating programs that prepare teacher mentors and support high-quality post-graduation mentoring (see chapter 3), enriched clinical experiences, research-based improvement opportunities, experiences for professors to visit P–12 schools, and fostering ongoing dialogue among the faculty at all educational levels. The Advisory Council recommends that clinical partnerships standardize expectations by preparing memoranda of understanding that delineate responsibilities of each partner and the candidates.

3. Facilitate ongoing and regular educator exchanges, such as teachers-in-residence and professors-in-the-classroom, to provide opportunities for post-secondary faculty and P–12 teachers and school leaders to spend a semester integrated into the educational fabric of the other sector. Partnership activities could include curriculum design, assessment, enrollment planning to meet labor market needs, staffing, joint appointments, granting clinicians and academics equal status in the university, joint program administration, etc.

Chapter 3 – Excellent Professional Support

Induction, Continuing Professional Development, and Teacher Leadership

"Good teachers are costly, but bad teachers cost more."

—Bob Talbert

This chapter outlines the TeachNY Advisory Council's analysis and recommendations related to the induction and continuing professional development of teachers and leaders. A key operating premise from the outset was that induction into the profession followed by ongoing professional development across the continuum of professional practice constitutes a necessary and natural extension of pre-service preparation in nearly all practice professions, from architecture to law, to medicine and accounting; and that providing a continuity of experiences is critically important during the initial years of professional practice.

Acknowledging the acute importance of excellent professional support, the Advisory Council explored the current policy context, including persistent challenges and evidence-based best practices, and iteratively developed recommendations regarding SUNY's role in and commitment to the continuum of professional development of educators—both teachers and leaders—in P–12 and higher education. The Advisory Council also considered possible expanded linkages to the NYS Master Teacher program and the development of a state-wide pathway to foster future teacher leaders. Here, we begin with a brief overview of challenges and opportunities, followed by a review of the literature and proposed recommendations for each area—induction, continuing professional development, and teacher leadership—as well as two cross-cutting themes, partnerships and professional learning communities.

The challenges identified across the continuum of professional support cluster around environment (isolation, competition, rapid change, and expanded technology); resources (time, mismatch between needs of teachers/leaders and materials); inequity across and within schools, districts, and states; paucity of sustainable partnerships/networks that connect higher education with school districts, states, and peer networks; and misalignment of expectations and authority (with and among students/parents, teachers, schools, and state and federal needs and requirements).

While professional development is required and funded in New York State and delivered by an array of providers, Advisory Council members cited frequent criticism of offerings in terms of quality, coherence, relevance, and continuity from one activity to the next. Moreover, in contrast to other countries where induction and professional development are standard fixtures, built into school routines and schedules (Green, 2014; Ripley, 2013), in the United States, more often than not, there is little to no time in a school day or week to allow for effective professional development (Gujarati, 2012). The Organisation for Economic Co-operation and Development's (OECD, 2014a) comparative analysis of the time that primary and secondary teachers spend teaching across countries points to a consistent pattern:

"Perhaps the most obvious challenge to teacher growth is the absence of downtime in the profession. The average teacher has one period each day for preparation, grading, and review. For the rest of the school day, teachers are with students—teaching or engaging in supervisory tasks. Consequently, not only are they constantly working—compared with the average American employee, who wastes an average of two hours each day—but are also constantly engaged in acts of performance. As a result, they have little time for practice, reflection, or innovation" (Schneider, 2015).

- Public primary school teachers teach an average of 782 hours per year, ranging from less than 570 hours in Greece and Russia to over 1,000 hours in Chile, Indonesia, and the United States.
- The number of teaching hours in public lower secondary schools averaged 694 hours per year, ranging from 415 hours in Greece to over 1,000 hours in Argentina, Chile, Mexico, and the United States.
- Teachers in public upper secondary schools teach an average of 655 hours per year, ranging from 369 hours in Denmark to over 1,000 hours in Argentina, Chile, and the United States.

Closer to home, in "A National Strategy to Improve the Teaching Profession," Schneider (2015) points to teaching's relative disadvantage compared to most other professions and—more generally—U.S. employees, noting,

> Perhaps the most obvious challenge to teacher growth is the absence of downtime in the profession. The average teacher has one period each day for preparation, grading, and review. For the rest of the school day, teachers are with students—teaching or engaging in supervisory tasks. Consequently, not only are they constantly working—compared with the average American employee, who wastes an average of two hours each day—but are also constantly engaged in acts of performance. As a result, they have little time for practice, reflection, or innovation. (p. 20)

The Advisory Council also noted lingering questions of credibility, with too many school personnel viewing university faculty, including those who teach in educator-preparation programs (EPPs), as out of touch with the reality of today's schools, and higher education faculty sometimes believing that school personnel are less aware of current research and evidence-based approaches, and that their practices employ strategies that may be less effective as a result. The Council considered steps that might be taken to address these credibility issues and persistent disconnects.

Coaching, reflection, peer support and networking, and a safe environment for experimentation and innovation are crucial to teacher and leader development, and partnerships between the state, higher education, and P–12 are the foundation.

The TeachNY Advisory Council explored policy elements that focus on the skill development and support structures necessary to effectively lead the classrooms of today and tomorrow, including classroom management, adaptability to individual learner needs, content knowledge, and skill with evolving technologies. The characteristics of the ideal effective and successful teacher are highly dependent on the school environment, population, and community; they differ by school district and are affected by administrators, students, parents, and community leaders. What additional knowledge and skills are to be acquired and renewed to evolve from novice to expert teacher? When should they be developed? And how should success in gaining this knowledge and understanding provide career opportunities for successful teachers? The Advisory Council suggests that coaching, reflection, peer support and networking, and a safe environment for experimentation and innovation are crucial, and partnerships between the state, higher education, and P–12 are the foundation.

I. Induction

Novice teachers benefit from support, especially in the early years of their careers. Numerous studies indicate that roughly 40% of novice teachers leave the classroom within the first five years (Ingersoll & Smith, 2003; Ronfeldt, Loeb, & Wyckoff, 2012). The statistics are even more disturbing in high-poverty schools, where attrition rates are roughly 50% higher compared to wealthier schools. The evidence suggests, however, that school environment rather than student demographics may be more determinate in novice teachers leaving the profession (Simon & Johnson, 2015).

The costs associated with teacher attrition are significant. A decade ago, when new teacher attrition was climbing at an alarming rate, the National Commission on Teaching and America's Future (2007) estimated the annual cost to the United States at roughly $7.3 billion per year.

Since the mid-1990s, states and local school districts have experimented with many strategies to help new teachers get through these difficult first years. Some of those strategies have begun to show promise, especially in this most recent decade. For example, in Gray, Taie, and O'Rear's (2015) recent report based on data from the federal Beginning Teacher Longitudinal Study, throughout the first four years of teaching, new teachers assigned a mentor saw approximately half the attrition of those without a mentor. But not all mentorship programs are equally effective; schools that create collaborative environments are much more likely to see success.

Research has shown that teachers are more satisfied—and more likely to stay—when they experience high levels of collegiality (OECD, 2014c). Collaborative activities afford teachers the opportunity to network with other teachers, provide mentoring and coaching, and build roots within their professional communities. Data from the OECD (2014c) Teaching and Learning International Survey (TALIS) indicate that mentoring and coaching activities not only benefit novice teachers; senior teachers are also more likely to experience a renewed dedication to their profession.

Collaborative activities afford teachers the opportunity to network with other teachers, provide mentoring and coaching, and build roots within their professional communities.

New teachers face myriad challenges. Often during their first year of teaching, they do not have time in their schedules for reflection or peer support. They frequently report feeling isolated, without supportive partners, at times working within a school environment that is more competitive than cooperative. The literature reports that novice teachers often decide to leave the profession because of some key school-level factors: low pay, lack of support from school leaders, problems with student discipline and motivation, and lack of professional autonomy (Murnane et al., 1991; Johnson, Berg, & Donaldson, 2005; Johnson, Kraft, & Papay, 2012; Ladd, 2011). State and local school leaders can address many of these factors through thoughtful reforms in school leadership, school culture, teaching and learning conditions, and mentoring and induction programs.

Induction programs work because they establish relational bonds and build community, shared historical knowledge, and institutional memory, while at the same time enhancing opportunities for new teachers to adopt curricular and pedagogical best practices.

Induction is a particular type of professional mentorship defined as "orientation and organizational socialization programming to help new teachers not only become familiar with organizational procedures but also with instructional goals and best practices" (Luke, 2014, p. 6). Ingersoll and Strong (2012) conducted a meta-review of empirical studies that evaluated the effects of induction programs on new

teachers and found that teachers who participate in induction programs produce greater student achievement outcomes and are less likely to leave the profession than those who do not. Induction programs work because they establish relational bonds and build community, shared historical knowledge, and institutional memory, while at the same time enhancing opportunities for new teachers to adopt curricular and pedagogical best practices.

The most efficacious induction programs build on initial educator preparation. The *design principles* built into excellent pre-service programs are also relevant to induction programs. One of these key design principles is sufficient time. Evidence suggests that teacher induction programs of at least two years help new teachers succeed and thrive in the profession (Goldrick, Osta, Barlin, & Burn, 2012; Odden, 2011). In fact, in 2010, a federal randomized controlled trial found that comprehensive teacher induction results in a positive, statistically significant impact on student achievement in new teachers' classrooms only when it is provided *during the first two years* of a teacher's career (Glazerman et al., 2010).

Other key design elements include careful mentor selection and training, program activities and objectives linked to requirements for advanced certification, program accountability through regular monitoring and evaluation techniques, and commitment by the state through funding. In the 2012 *Review of State Policies on Teacher Induction* by the New Teacher Center, Goldrick and team found that of the 27 states that require some form of teacher induction or mentoring, only three states—Connecticut, Delaware, and Iowa—require at least two years of induction support as a condition of educator licensure and provide dedicated funding to support local programs and mentors.

An additional key design principle is the shared responsibility of the educational pipeline partnership. Just as local schools and teachers assume the supportive, albeit critical, partner role in the initial educator preparation, higher education faculty and leadership assume a similar critically important supportive partner role in ensuring that there is ongoing support, requisite professional development, and appropriate formative evaluation of first-year teachers.

New York State should support every beginning teacher's participation in and completion of a robust, high-quality induction program of no less than two years during the initial years of practice.

Recommendations for Induction

Recognizing that induction is a natural extension of pre-service preparation and the norm in practice professions,

1. New York State should support every beginning teacher's participation in and completion of a robust, high-quality induction program of no less than two years during the initial years of practice.

2. New York State should establish a flexible framework for induction programs and allocate the necessary funds to support a set of essential evidence-based components across all programs, as well as options from a menu of possible elements, to accommodate local context, priorities, and needs.

- The essential evidence-based components should include rigorously selected mentors, high-quality and comprehensive training for mentors, and sanctioned time for mentors to support new teacher development within the school day.

- For schools or districts in hard-to-staff communities, where there is low capacity to provide in-house quality mentoring, New York State should support districts by investing in full-time instructional mentors to be recruited, trained, and deployed across schools with the highest need.
- The state and district should further look to sustain quality induction programs by allocating contractual roles, such as the Lead Teacher and Peer Collaborative Teacher roles, to instructional mentoring.

3. P–12 schools, districts, BOCES, Regional Information Centers (RICs), and Teacher Centers should engage higher education institutions/systems and their EPPs in the ongoing development, implementation, and evaluation of induction programs.

4. SUNY—as a system, as networks of campuses, and as individual campuses and faculty members—should commit to being an active partner with schools and districts in creating co-learning communities to support successful teacher induction, building on core elements of pre-service preparation.

5. To support network improvement communities around induction, SUNY should work with its P–12 colleagues to support research and analysis on top-performing practices and their associated policies—internationally, across the United States, and in New York—and scale up as appropriate.

Recommendation Highlight: **SUNY—as a system, as networks of campuses, and as individual campuses and faculty members—should commit to being an active partner with schools and districts in creating co-learning communities to support successful teacher induction, building on core elements of pre-service preparation.**

II. Continuing Professional Development

The factors that most influence student achievement, beyond the individual student, are factors related to the teacher. By far, teachers are the most important in-school factor in student achievement, accounting for roughly 7–11% of the variance (Hattie, 2009).

In a comprehensive meta-analysis of over 50,000 studies, researchers concluded that professional development for teachers ranked among the top 20 most influential factors in determining student success (Hattie, 2009). Well-designed professional development can help teachers increase student achievement by as much as 21 percentile points (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Note the qualifier: well-designed. Research has also shown that poorly designed professional development programs are simply not effective (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009). To foster continuing development after the first years of practice, and to keep veteran teachers renewed, as of the 2015–16 budget, New York State requires each certified teacher to acquire 100 hours of professional development every five years. While sustained learning for teachers is critical, simply investing time in professional development does not reach far enough. Sustained, *well-designed* professional development over the course of a teacher's career works!

Educational researchers have established a rich evidence base that indicates that professional development is most effective when woven into the school culture, thereby creating an environment of collegial learning and communities of practice (Wei et al., 2009).

Effective professional development programs establish continuous-improvement learning communities, draw on experts, are content-rich, are embedded in the teachers' workday, and focus on student work. Taken together, these criteria answer important questions: *Who*, *what*, and *how?*

Educational researchers have established a rich evidence base that indicates that professional development is most effective when woven into the school culture, thereby creating an environment of collegial learning and communities of practice (Wei et al., 2009). This approach combines "external" structured activities such as workshops and school visits with internally embedded continuous learning. In this model, teachers benefit from direct training from outside experts who provide research-based knowledge about how students learn (Guskey & Yoon, 2009), but the *combination* of practical, in-school expertise with the academic researchers who often design the development programs truly facilitates implementation. This synergistic combination further accentuates the need for robust partnerships among all education communities: local school districts, higher education, and regional and state agencies.

Two additional characteristics are critical to well-designed, effective professional development: the actual content (what) and its delivery (how). Ongoing teacher training helps teachers stay abreast of current developments within their field(s); these programs also emphasize new facilitation methods by incorporating new technologies.

To effectively address pervasive inequities, especially prevalent in high-poverty schools, professional development programs should include the managerial, social, instructional, and political skills that teachers and school leaders need to succeed (Simon & Johnson, 2015).

To effectively address pervasive inequities, especially prevalent in high-poverty schools, professional development programs should include the managerial, social, instructional, and political skills that teachers and school leaders need to succeed (Simon & Johnson, 2015). While content-rich professional development programs are increasingly available, use of new technologies lags behind in teacher improvement, with too much training focused on non-instructional/administrative tasks compared to classroom integration (National Education Association, 2008). Effective teachers continue to apply innovations in established pedagogies in their classrooms, refining skills essential to student learning. Technology not only affords teachers new pedagogical opportunities but also allows for innovation in professional development program design (Borthwick & Pierson, 2008). Given the rapid pace of technological change, professional development is one of the most practical mechanisms to encourage continuous improvement in adoption of technology in the classroom.

Recommendations for Continuing Professional Development

Recommendation Highlight: **Provide appropriate/ differentiated supports and resources across the continuum of professional development, from novice to expert teachers, including expanded support for National Board certification.**

The needs of novice teachers are not the same as those of experienced teachers. Different professional development activities for educators serving in different roles (e.g., teachers, school counselors, curriculum specialists) and with different levels of experience (novice to expert educator) need to be identified and provided. Preparation program partners can provide assistance with assessing the professional development needs of the various groups of educators in the partner school district(s) and in arranging for differentiated activities. Higher education institutions might also offer library and materials center resources and technology in collaboration with area Teacher Centers.

The Advisory Council recommends that New York State, P–12, and SUNY:

1. Provide appropriate/differentiated supports and resources across the continuum of professional development, from novice to expert teachers, including expanded support for National Board certification.

2. Provide opportunities and support for P–12 teacher research, including joint projects among faculty members, teachers, candidates, and students.

3. Enhance higher education faculty access to professional development presented to teachers and school leaders. This could involve a professors-in-the-classroom type program.

4. Leverage Open SUNY's online capacity and highly regarded faculty development infrastructure, including its recently established Center for Online Teaching Excellence (COTE)—a learning community that includes over 1,000 fellows committed to excellence in the use of instructional technology, the *Online Teaching Gazette*, and numerous other instructional technology resources—to support novice through expert teachers and leaders throughout New York State.

Recommendation Highlight: **Leverage Open SUNY's online capacity and highly regarded faculty development infrastructure, including its recently established Center for Online Teaching Excellence (COTE)…to support novice through expert teachers and leaders throughout New York State.**

III. Teacher Leadership

Teacher leadership is the chance for teachers to expand their knowledge and professional growth while continuing to teach in the classroom. The hybrid role of "teacher leader" gives expert teachers in the classroom opportunities to mentor or collaborate with other teachers, strengthen their schools, incubate innovative ideas, and expand the knowledge base and prestige of the profession (Curtis, 2013).

According to Berry (2013), almost a quarter of U.S. teachers are interested in these hybrid roles that allow them to teach students and create and carry bold ideas from the classroom into the school community, across districts, and beyond, yet opportunities for such leadership are frequently contingent upon administrative appointment or "anointment." Berry (2013) makes the case for teacher leaders as *teacherpreneurs*—empowered classroom experts who teach students regularly and have the time, space, and reward mechanisms that enable them to create and spread innovative ideas in and out of their schools, districts, state, and nation.

Teacher leadership is most effective when paired with intentional and strategic vision, focused on solving specific problems or implementing systematic transformative change. While conceptual frameworks exist to support teacher leaders, the defined roles of teacher leaders are specific to the school or system in which they work (Aspen Institute, 2014; Curtis, 2013). The Teacher Leadership Initiative (TLI), a joint endeavor of the Center for Teaching Quality, National Board for Professional Teaching Standards (NBPTS), and the National Education Association (NEA, 2014), introduced a conceptual framework that defines three categories (pathways) of teacher leadership: instructional, policy, and association. Others define a variety of roles that teacher leaders can fill, including providing resources, data analysis, and instructional or curriculum strategies; offering various levels of classroom support from demonstration to mentoring; actively engaging in leadership of committees, teams, or associations; providing peer or system evaluations; and serving as leaders and proponents of professional learning communities (Danielson, 2013; Harrison & Killion, 2007).

Regardless of which leadership roles teachers take, teacher leaders can use their expertise to have a profound effect on building a school culture of collaboration and continuous improvement, lifelong learning, student success, and professional prestige. Experts caution that although many teachers do and should participate in

leadership in informal ways, to enact strong, long-term impact on students, schools, and the profession, these roles must be formalized at the school in agreement with collective bargaining units, or more effectively, at the district or state level (S. Johnson, 2013).

Another area where teacher leadership and partnership can intersect is in research. Research on teacher education and student learning is mostly associated with colleges and universities. However, much inquiry, experimentation, and reflection happens in the in-school environment, where the interaction between teacher and students can prove or disprove concepts daily. Especially for new teachers, the first few years involve substantial in-service training, continued learning, and applied problem-solving—an extension of the learning started during pre-service teacher preparation—yet research rarely explores the schoolhouse as a teacher education site (Hopkins & Spillane, 2014).

Engaging practicing teachers as leaders is an essential feature in the development of the profession. Exemplars of such engagement can be seen at national, state, and local levels, including the National Board's *Teach to Lead*, the NYS Master Teacher Program, and SUNY's own Teacher and Leader Education (S-TEN) effort, as described below:

***Teach to Lead*, sponsored by the National Board for Professional Teaching Standards and the US DOE, seeks to highlight existing state and district systems that are working to support teacher leadership, share resources to create new opportunities for teacher leadership, and encourage people at all levels to commit to expanding teacher leadership.**

Teach to Lead, sponsored by the National Board for Professional Teaching Standards and the U.S. Department of Education, seeks to advance student outcomes by expanding opportunities for teacher leadership, particularly those that allow teachers to stay in the classroom. Through its online community and series of regional Teacher Leadership Summits, the initiative seeks to highlight existing state and district systems that are working to support teacher leadership; share resources to create new opportunities for teacher leadership; and encourage people at all levels to commit to expanding teacher leadership.

The *New York State Master Teacher Program* celebrates the work of the state's highest-performing STEM teachers through a professional community dedicated to developing expertise in the areas of content, pedagogy, and students' families and communities.

The New York State Master Teacher Program celebrates the work of the state's highest-performing STEM teachers by establishing a professional community dedicated to developing expertise in the areas of content, pedagogy, and students' families and communities. These outstanding teachers have been recognized for their dedication to providing the most innovative STEM education to their students, their commitment to professional growth, and their enthusiasm for sharing their successful practices with colleagues in their schools and districts. Supported by their regional SUNY campus faculty, the Master Teachers are designing their own robust professional development program that builds on their strengths and addresses their school/district needs. Introducing motivated teachers to like-minded professionals and high-quality growth experiences keeps our best teachers in the classroom, providing a structure to share their expertise with their peers, furthering student success and helping to build the foundation for college readiness and the skilled workforce that will keep New York competitive in the 21st-century global economy. Inspiring our state's best teachers and rewarding their efforts ultimately attracts talented students into careers in STEM fields, including STEM education.

The SUNY Teacher and Leader Education Network (S-TEN) offers numerous examples of innovative higher education/P–12 collaborative approaches to teacher and teacher leadership development. For example, SUNY Geneseo has developed a new teacher apprenticeship program in partnership with Rochester City Schools. SUNY Plattsburgh at Queensbury, SUNY Potsdam, and SUNY Oneonta, among other SUNY programs, offer professional development activities for P–12 and education faculty. And SUNY Fredonia provides an excellent example of simultaneous renewal in teacher leader

development, with its implementation of onsite field-based and methods courses, co-taught by P–12 and higher education faculty.

Recommendations for Teacher Leadership

The knowledge bases and skill sets for effective and caring teachers and school leaders overlap in a number of areas. For example, knowledge of organizations and organizational behavior in education are common to both. The individuals serving various roles in schools are better able to collaborate if they know something about each other's responsibilities. Action research was mentioned previously as an essential part of simultaneous renewal. Both teachers and administrators need to know how to conduct research, interpret data, and use data to continuously improve the education of students. EPPs should identify the areas of commonality across educator roles and strengthen their programs to allow for instruction to both groups in preparation programs.

The Advisory Council recommends that New York State, P–12, and SUNY:

1. Recognize and support leadership in the form of service to the profession—at the local, state, and national levels—as an essential feature of a mature profession.

Recommendation Highlight: **Recognize and support leadership in the form of service to the profession—at a local, state, and national level—as an essential feature of a mature profession.**

2. Embed principles of effective leadership into both pre-service and professional development curricula, and redesign teacher- and school-leader programs to prepare teachers and school leaders together.

3. Work in partnership to establish school environments that promote highly effective recruitment, retention, induction, and ongoing professional development of school leaders, with particular attention paid to high-poverty schools and districts.

Recommendation Highlight: **Work in partnership to establish school environments that promote highly effective recruitment, retention, induction, and ongoing professional development of school leaders, with particular attention paid to high-poverty schools and districts.**

- Create virtual communities and connecting hubs for teacher leaders across New York, and support their professional development with micro-credentialing and other such tools.
- Support peer-visitation teams for formative evaluation and development of highly effective school leaders.

IV. Partnerships and Professional Learning Communities

Partnerships

As described in the first three sections of this chapter, the TeachNY Advisory Council recommends that educator preparation and the ongoing professional development of teachers and leaders become more of a partnership than it tends to be at present. While the retention and ongoing effectiveness of teachers is certainly tied more to the nature of the school in which they teach than to their initial preparation, there is vast opportunity for schools of education to support professional development in partnership with P–12.

An effective partnership depends on each participant's belief that the others have a credible contribution to make to the renewal of the education of students and future educators. Higher education faculty and partnering school staff need to

come together to exchange information on their practices and roles. Institutions that work together can create an environment conducive to the effective preparation of educators from selection, to pre-service education, to induction and ongoing professional development.

Professional Development Schools have further expectations in terms of joint inquiry and professional development in both sectors, extending beyond the education of prospective teachers to school-based engagement and leadership in school renewal.

As Howey (2015b) points out, a range of partnerships exists, from Partner Schools, to Professional Development Schools, to 21st Century and New Tech Schools:

Partner Schools are those where a school of education regularly places prospective teachers for capstone student-teaching experiences. Since teachers are placed in each partner school on a regular basis, school faculty members are familiar with the practices and philosophy of the preparation program and may have been provided with training by the program. Higher education faculty and/or clinical supervisors engage with partner-school faculty on a regular basis.

Professional Development Schools have further expectations in terms of joint inquiry and professional development in both sectors, extending beyond the education of prospective teachers to school-based engagement and leadership in school renewal. In these partnerships, college faculty, school administrators, and practicing teachers deliberate on how to cooperatively supervise pre-service teachers and provide closer connections to classroom practice, promote professional development for in-service teachers, improve student learning, and research educational practice for school reform. In the 1990s, the Holmes Group laid out six principles for Professional Development Schools. Over the past quarter of a century, those principles have been adapted and expanded to varying degrees. Today, the National Association of Professional Development Schools (2008) lists nine essential characteristics:

The Buffalo State _Professional Development Schools Consortium_ is a network of partnerships that includes elementary schools, colleges whose programs are jointly registered with Buffalo State, and several organizations that promote excellence in education within Buffalo State and across Western New York.

1. A comprehensive mission that is broader in its outreach and scope than the mission of any single partner and that furthers the education profession and its responsibility to advance equity within schools and, by potential extension, the broader community…;
2. A school-university culture committed to the preparation of future educators that embraces their active engagement in the school community…;
3. Ongoing and reciprocal professional development for all participants guided by need…;
4. A shared commitment to innovative and reflective practice by all participants…;
5. Engagement in and public sharing of the results of deliberate investigations of practice by respective participants…;
6. An articulation agreement developed by the respective participants delineating the roles and responsibilities of all involved…;
7. A structure that allows all participants a forum for ongoing governance, reflection, and collaboration…;
8. Work by college/university faculty and P–12 faculty in formal roles across institutional settings…; and
9. Dedicated and shared resources and formal rewards and recognition structures. (pp. 3–8)

The Buffalo State Professional Development Schools Consortium offers an exemplar. Its network of partnerships includes elementary schools, colleges whose programs are jointly registered with Buffalo State, and several organizations that promote excellence in education within Buffalo State—the Center for Excellence in Urban and Rural Education (CEURE) and Project Flight—and across western New York. Critical aspects of the program involve creating and maintaining a collaborative community partnership with urban, suburban, and rural school districts; collaboratively identifying, developing, and refining practices that promote student achievement; supporting initial preparation and continuing professional development for teachers and other school-based educators; and supporting teacher inquiry to improve pupil and educator development (Buffalo State College, n.d.).

21st Century and New Tech Schools use contemporary technologies and project- or problem-based approaches to achieve deep and powerful learning and improved practice. These innovative schools can function as "lighthouses" for other P–12 schools and offer vast opportunities for experimentation, research, and inquiry across P–12/higher education partnerships. Martinez and McGrath (2014) studied eight such innovative schools—schools that are establishing a new normal for teaching and learning by insisting on deeper learning goals and revitalizing the way teachers teach and develop.

Taking a page from successful systems change, Ted Kolderie (2014) suggests a split-screen strategy for education reform. Put simply, enable those who want to innovate and test new ideas and approaches (without the burden of excessive regulation); likewise, allow those who prefer more traditional approaches to continue to improve without having to adopt "radical" approaches. The endless argument about "right way" versus "wrong way" is unproductive; the better approach, in Kolderie's view, is to run parallel efforts aimed at improvement. Thus, a range of partnerships can be accommodated using the split-screen (with 2, 3, … n splits) strategy, opening up new and fundamentally different models of teaching and learning while also continuing to improve traditional approaches, transforming education into a self-improving system.

Professional Learning Communities

The development of professional learning communities within a P–12/higher education partnership has the potential to support the renewal of individuals, schools, and preparation programs. In a professional learning community model, the interests and needs of the respective partners are identified and supported. P–12 stakeholders can work with EPPs to craft curricula that reflect the current and projected P–12 teaching environment, while higher education stakeholders can keep P–12 professionals apprised of the research on best practices in the field. The learning community might also explore approaches that need to be taught in preparation programs and practiced by in-service educators, such as strategies for working with parents and the community or integrating content areas in the curriculum. These communities, then, can serve as a mechanism for simultaneous renewal of programs and schools.

The Advisory Council recommends the development of professional learning communities that involve both preparation program faculty and in-service educators. It is through these learning communities that professional renewal can occur. Importantly, the communities do not spontaneously emerge and run themselves. The development of communities needs to be planned and supported with incentives and other resources. The communities will vary in size and makeup, as well as focus. Some will consist of beginning teachers and their mentors only, while others will involve a wide range of educator roles from principals to cafeteria employees to maintenance staff. All communities should focus on specific issues and tasks that are intended to enhance the education of all students, whether in P–12 or college classes. It will be the responsibility of the leaders of the schools and the preparation programs to initiate, fund, and support the continuing work of the communities. An important aspect of community development is leveraging research from within the professional learning communities themselves.

As part of the SUNY Teacher and Leader Education Network (S-TEN) initiative, SUNY and its partners have established the SUNY Educator Preparation Repository and Online Resource Center, a repository of evidence-based practices and materials to be made available through the SUNY Learning Commons, a platform that enables communities of practice to share and access scholarly and instructional materials, resources, standards, policies, and best practices. Individual teacher educators, partnering P–12 teachers, school leaders, students, and others will be able to examine a range of materials, professional development activities, and artifacts that they might adapt for use in their own teaching and practice. SUNY is currently piloting this effort and developing and refining protocols for content, communication, and process.

Another example of professional learning communities can be seen in the establishment of Centers of Innovation. The Center of Innovation in Education at SUNY Cortland is a regional hub for the advancement and improvement of teacher education; it offers unprecedented opportunities for professional development to support the learning of current and future teachers. The Center is a central resource site for teacher candidates, education faculty, and teachers of all subjects in all grade levels. It offers workshops and enrichment opportunities focused on five core areas (evaluation of instructional methods and outcomes, project-based learning, clinically rich educator preparation, educator preparation strategies, and effective communication in science education) that build on work underway by SUNY Cortland and its partners in the region. Ultimately, SUNY Cortland will become a regional hub for professional development and a center for discussion and research related to cutting-edge teaching strategies for preschool through college and beyond.

…key components to successful induction and professional development programs—for both teachers and leaders—must include strong and durable partnerships, flexible frameworks, communities of practice, a culture of research and evidence-based practice, formative evaluation, peer review and support, and regular communication.

Recommendations for Partnerships and Professional Learning Communities

Focusing on enabling policy (rather than additive rules and regulations), the Advisory Council recommends that key components to successful induction and professional development programs—for both teachers and leaders—must include strong and durable partnerships, flexible frameworks, communities of practice, a culture of research and evidence-based practice, formative evaluation, peer review and support, and regular communication.

A basic premise was that to ensure smooth entry of newly minted teachers into the classroom, as well as high-quality teaching across the professional-growth continuum from novice to expert, SUNY must actively engage with P–12 colleagues in establishing, supporting, and evaluating induction and professional development programs for teachers and leaders. A quality teaching and leadership workforce is a shared responsibility, necessitating commitment and partnerships.

The Advisory Council recommends that New York State, P–12, and SUNY:

1. Establish a single integrated system of educator development between universities and school districts, BOCES, Regional Information Centers, and NYS Teacher Centers, to leverage expertise and resources across P–20 sectors.

- Endorse and assume shared responsibility for the continuum of learning and development, from pre-service, to induction, to ongoing professional development, based on the needs of individual teachers and leaders, local districts, regions, and beyond.
- Establish evidence-based standards and adequate fiscal support for strong and enduring partnerships, to be regularly reviewed by SUNY (system with campus leadership and faculty), P–12 partnering schools and their faculties, teacher unions, and NYSED, with attention to the most appropriate level of partnership.
- Establish "lighthouse" partner schools associated with EPPs where true collaboration occurs and the school (rather than the college classroom) is the primary source of teacher training, professional development, research, and innovation. (Note: These schools could be newly created, existing, or reformed.)

2. Develop and support professional learning communities that are inquiry/research-based and include pre-service to novice to expert teachers, along with administrators and higher education faculty, to inform excellence in teaching, learning, and leadership.

- Leverage the NYS Master Teacher Program to create a professional learning community that establishes a structure to engage in ongoing, collaborative discussions and associated research of evidence-based successful teaching practices, supports novice and experienced teachers in the classroom, and attracts talented students into STEM teaching careers.
- Foster and incentivize educator creation/distribution of knowledge (e.g., through field and teacher action research), providing opportunities and support for P–12 teacher research, including joint projects among faculty, teachers, administrators, and students.
- Support and maintain the SUNY Educator Preparation Repository and Online Resource Center; in partnership with the profession, identify policies and procedures for taking innovative evidence-based practices to scale.

Recommendation Highlight:
Establish a single integrated system of educator development between universities and school districts, BOCES, Regional Information Centers, and NYS Teacher Centers.

Recommendation Highlight:
Develop and support professional learning communities that are inquiry/research-based and include pre-service to novice to expert teachers, along with administrators and higher education faculty, to inform excellence in teaching, learning and leadership.

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Leverage the NYS Master Teacher Program to create a professional learning community that establishes a structure to engage in ongoing, collaborative discussions and associated research of evidence-based successful teaching practices, supports novice and experienced teachers in the classroom, and attracts talented students into STEM teaching careers.

- Mobilize the recently formed SUNY Teaching, Learning, and Assessment Network of Excellence to support professional learning communities across P–20, harnessing SUNY's vast educational research strengths, thereby connecting teachers and leaders to established researchers (from a wide range of applicable fields) and vice versa.
- Develop a framework of assessment to support continuous improvement of professional learning communities and to demonstrate their impact.

"Our progress as a nation can be no swifter than our progress in education. The human mind is our fundamental resource."

—John F. Kennedy

Educational institutions provide our communities and economy with the human capital necessary for material and cultural progress, and today's educators have come to expect that they must participate in effective accountability systems.

Given that teachers are the single most influential in-school factor in fostering student learning, it is imperative that educator-preparation programs (EPPs) are assessed and evaluated to ensure that they are providing the knowledge, skills, and tools needed to serve students well. Because the work of teachers is influenced by the context in which they teach, and because a significant contextual factor is the school leadership, it is important that this include those preparing to become school leaders in addition to those preparing to become teachers.

The TeachNY Advisory Council was charged to identify a set of recommendations for EPPs, with particular attention to advances in technology and changing student needs, to support continuous improvement and excellence. This chapter begins with an overview of the recent educational accountability movement and then briefly reviews the range of accountability systems and standards for both individual teachers and preparation programs. It then concludes with the Advisory Council's recommendations for evaluation and assessment.

While the members of the TeachNY Advisory Council are experienced and extremely knowledgeable about the current accountability systems, it was instructive for the group to fully discuss these systems and the issues they raise. At the Council's meeting in February 2015, the members heard presentations from a range of perspectives, including Michael Allen, co-founder of Teacher Preparation Analytics, who summarized a report commissioned by the Council for the Accreditation of Educator Preparation that proposes key indicators for an evidence-based system to assess teacher preparation; Kate Walsh, president of National Council on Teacher Quality, who spoke of her organization's standards and indicators for teacher-preparation program review; and Randi Weingarten, president of the American Federation of Teachers, who discussed the AFT position on teacher evaluation and the need to raise the bar for educator preparation. In addition, Chancellor Zimpher briefed the Council on the SUNY Excels performance system, which is designed to foster continuous improvement toward excellence, targeted metrics, performance planning, and an associated investment fund, and highlighted SUNY's commitment to accountability, transparency, and data-informed policy and decision making. In the extensive discussions that followed, Council members examined the challenges and opportunities, as well as promising policy directions, for evaluation and assessment.

The Modern Education Accountability Movement

During the first half of the twentieth century, U.S. education lived in the long shadow of John Dewey and his philosophical assumptions about the social nature of schooling. More often misunderstood than not, Dewey was thought to value process or method over content, the felt experience over the acquisition of specific knowledge. And, in the midst of the Cold War with the Soviet Union in the 1950s, criticism of "Deweyism," of U.S. education and its educators, became commonplace. "Why can't Johnny read?" Rudolf Flesch queried in his unlikely 1955 best-seller, and the answer for many was that schools had become wedded to the "whole word" (also referred to as "whole language") method of teaching reading.

Two years later, in October 1957, the Soviet Union launched Sputnik, the first artificial Earth satellite, reviving the charges about the manifold problems with U.S. education, especially education in science and math. Effective education at this time was seen through the lens of the Cold War, which meant that it became imperative, as a matter of national defense, that U.S. education improve—hence, the passage of the National Defense Education Act in 1958.

This issue served as the impetus for the federal government's beginning to become much more deeply involved in what had been the most local of institutions in the country: the neighborhood school. Since the late nineteenth century, a federal agency had been assigned to education, but it had been limited to collecting data from state superintendents. Now, post-Sputnik, the environment shifted. A telling moment occurred during the first presidential debate in October 1960, when the candidates, John F. Kennedy and Richard M. Nixon, agreed that it was time for the federal government to directly fund U.S. primary and secondary education. The fact that they wanted to fund different things, at different levels, was less important than their agreement about the need to use federal dollars to support what had been locally financed and locally governed for a century. With Kennedy's election, the administration unsuccessfully pushed to increase federal involvement in pre-collegiate education, but following his death and Lyndon Johnson's landslide election in 1964, Congress swiftly passed the Elementary and Secondary Education Act (ESEA) in 1965, providing federal funding to educate all students, especially the disadvantaged (Thomas & Brady, 2005).

With the federal government's growing interest in education, U.S. Commissioner of Education Francis Keppel moved to build on the historic mission of his agency to collect educational data. But given the sensitivity to a potential federal intrusion into local affairs, especially as it might involve invidious comparative state data, Keppel solicited Ralph W. Tyler to secure funding from the Carnegie Corporation to create a new national data set on student achievement. Even this effort threatened too many, and the opposition effectively delayed implementation until 1969. In time, the project proceeded through the Education Commission of the States, and it was called the National Assessment of Educational Progress (NAEP), which from 1972 forward was funded entirely by federal sources (Vinovskis, 1998). NAEP became—and remains—a national scorecard, providing one measure of national educational attainment over time.

The advent of NAEP ushered in a concern for the lack of common national standards. Without a common curriculum, assessments of student performance could not yield greater understanding of student progress toward meeting common metrics (National Center for Education Statistics, 2015).

The U.S. Department of Education became a Cabinet-level organization in 1979 and federal involvement in national educational assessment became an accepted part of the U.S. governance landscape within a few short years. In 1983, the National Commission on Excellence in Education, appointed by the Secretary of Education Terrel Bell, issued a shocking report, *A Nation at Risk*. The report highlighted declining SAT scores over the previous two decades (a set of data that was later questioned) and international comparisons that indicated that U.S. students were falling behind those of other countries (Senge et al., 2000). To combat what it termed "a rising tide of mediocrity" the Commission recommended a number of reforms. While the report created a furor and engendered a thirst for reform, few of its specific recommendations were adopted.

Beginning in the late 1980s, the federal government began to prompt states to create learning standards for student performance that specified desired learning outcomes: what students were expected to know and be able to do at different grade levels. In 2001, these efforts culminated in the reauthorization of the Elementary and Secondary Education Act, more popularly known as *No Child Left Behind* (NCLB), which required states to establish learning standards. However, there was little commonality across state standards, reinforcing the difficulty of conducting a meaningful national education assessment (Shephard, Hannaway, & Baker, 2009; Thomas & Brady, 2005).

This deficiency was finally addressed in 2009 by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO), which began an effort to develop standard expectations for U.S. students at a number of different grade levels. The Common Core, as it came to be called, contained specific learning standards that were reviewed by constituents and presented to states for adoption. By 2014, 43 states, the District of Columbia, four territories, and the Department of Defense Education Activity (DoDEA) had adopted the Common Core Learning Standards (Common Core State Standards Initiative, 2015). To date, assessments for the Common Core have been developed and utilized in several states, including New York, with modifications being implemented in response to critical feedback from educators and other members of the public.

Another important initiative of 2009 was the inclusion of $4.35 billion for Race to the Top (RTTT) funding as part of the Recovery and Reinvestment Act following the 2008–09 plunge into the deepest economic recession in more than a half century. States vied for the dollars through a competitive process, the first and only absolute priority of which was a *demonstrable* "commitment to educational reform" in four specific areas, one of which was the adoption of common K–12 standards.

In 2010, New York State was among the 19 states awarded funds by the U.S. Department of Education in the RTTT competition, receiving nearly $700 million, second only to Florida in the size of the award. As part of its successful Round II application, New York laid out criteria by which its educator-improvement plans would be evaluated. The New York State Legislature passed legislation requiring the

development of evaluation plans based on RTTT criteria in early 2012, with revisions to the legislation approved by the governor in 2015.

The past half century, then, has witnessed dramatic changes in the funding and structure of U.S. education, with growing involvement of national authorities, most directly federal agencies that have demanded increasing accountability from many of the constituent elements within the educational enterprise, including state authorities, school districts, teachers, and even EPPs, for their support. In the process, the Common Core has emerged as something *akin* to a national curriculum.

Accountability Systems and Standards

Accountability systems for teachers and school leaders and educator-preparation programs exist to assure the public that a mechanism is in place for evaluating performance and to provide support for improvement.

Accountability systems for teachers, school leaders and EPPs exist to assure the public that a mechanism is in place for evaluating performance and to provide support for improvement. While a number of distinct accountability systems are employed (Feuer, Floden, Chudowsky, & Ahn, 2013), the Council examined accountability systems at four levels: state and federal, professional, system (SUNY), and campus-specific.

We begin with a brief overview of some of the standards that drive these accountability systems.

The Council of Chief State School Officers (2013) Interstate Teacher Assessment and Support Consortium (InTASC) Standards and Learning Progression for Teachers specify both what teachers should be able to do and how teaching practice should develop over time. Ten standards fall into four areas: the learner and learning, content, instructional practice, and professional responsibility. These standards are increasingly cited as the basis for the design and evaluation of pre-service programs, as they are aligned with the Common Core Learning Standards (CCLS), emphasizing instructional strategies directed at critical thinking and deep understanding of subject matter. InTASC standards are easily translated by programs into assessment instruments for formative and summative performance assessments of teacher candidates, and even more critically, guide professional learning and development, from beginning teacher to teacher leader.

Danielson's (2014) framework, which uses a rubric format with four levels of performance, is also frequently used to evaluate both pre-service and practicing teachers. In the most recent version, Danielson (2014) explicitly aligns the framework with InTASC as well as the CCLS. In addition, Danielson highlights those aspects of her framework that relate directly to Common Core *teaching*, such as developing inquiry skills and providing for critical thinking in discussion, among other teaching skills. Candidate performance in a classroom as well as artifacts from teaching are assessed using the framework checklist and rating scale.

A third set of standards is outlined in the National Board for Professional Teaching Standards (NBPTS, 2014a). Five core propositions form the basis of the standards:

1) Teachers are committed to students and their learning.
2) Teachers know the subjects they teach and how to teach those subjects to students.
3) Teachers are responsible for managing and monitoring student learning.

4) Teachers think systematically about their practice and learn from experience.
5) Teachers are members of learning communities.

The standards define what accomplished teachers should know and be able to do. Importantly, the NBPTS website cites a number of research studies that indicate that Board-certified teachers outperform other teachers (see NBPTS, 2014b), providing evidence of the validity of the standards and further demonstrating the return on investment in professional development leading to recognized advanced practice and Board certification within an area of specialization. Included in the process is a portfolio of artifacts and reflections submitted by the candidate for rigorous peer review.

The standards set by the Council for the Accreditation of Educator Preparation (CAEP) provide yet another accountability system. These are the most salient for SUNY's EPPs, in fact for all EPPs in New York State, because NYSED Commissioner's Regulations require the programs to be professionally accredited.

The overarching goal of CAEP accreditation is to ensure quality and support continuous improvement of EPPs to strengthen P–12 student learning. CAEP specifies five standards, each with multiple components, by which programs demonstrate that their graduates are caring and qualified and that the program operates from a culture of evidence and continuous improvement:

- content and pedagogical knowledge (based on InTASC standards);
- clinical partnerships and practice;
- candidate quality, recruitment, and selectivity;
- program impact; and
- provider quality, continuous improvement, and capacity (CAEP Commission on Standards and Performance, 2013).

In addition, embedded throughout these standards, programs must provide evidence of meeting two cross-cutting themes: diversity, and technology and digital learning. Evidence provided to support meeting each standard must be reliable and valid, and institutions must use multiple measures to document the effectiveness of the preparation program, including standardized tests, employer and alumni surveys, and course grades.

While each of the CAEP standards requires evidence that the standard has been met, the fifth stands out with regard to long-term accountability since it focuses on continuous improvement. Standard five requires inclusion of both a quality control system and a continuous-improvement plan. Improvement plans are the result of carefully examining evidence of program effectiveness and, together with stakeholders, identifying areas where program improvements can be made. Strategies for improving candidate quality are then developed by the program, implemented, and evaluated through the use of the quality control system. The CAEP accreditation process verifies that the continuous improvement cycle and quality control system are functioning as designed.

State and Federal Accountability

The conjoined state and federal accountability systems share a common purpose: to assure schools and the public that new teachers and leaders are able to perform effectively, by determining the extent to which educator-preparation programs meet the standards specified for effective beginning educators. Unlike the progression toward increased standardization of P–12 curricula and learning outcomes over the last half century, with concomitant national testing to gauge progress, there is little to no standardization of educator preparation across states beyond general expectations for monitoring programs. And, in sharp contrast to most practice professions (e.g., medicine, dentistry, nursing, accounting), which require candidates to pass a single national examination (typically with substantial oversight from the professional body itself), before they can be licensed or certified in their respective state, education has a "lavish" array of tests and state-specific rules that govern both entry into practice and professional advancement (Ginsberg & Kingston, 2014). States continue to enjoy substantial discretion in preparation practices, and, as one might expect, the result is tremendous variation in accountability systems for pre-service teachers and the programs that prepare them.

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In New York State, the Board of Regents oversees the University of the State of New York (not to be confused with The State University of New York), which includes P–12 education, higher and professional education, vocational rehabilitation services, and cultural education. The New York State Education Department (NYSED), which is advised by the Professional Standards and Practices Board (PSPB), is charged by the Board of Regents to monitor program compliance with regulations governing teacher and school-leader preparation. The accountability system designed to address this charge includes regulations that specify both program content (inputs) as well as performance indicators (outputs), in the form of certification exam results.

The required certification exams evaluate program outputs of teacher and school-leader programs or equivalent preparation by setting cut score criteria on tests of content knowledge and pedagogy. Evaluation of the degree to which programs comply with Commissioner's Regulations is done through the monitoring of certification test score results for program completers via the federal Title II report.

Pass rates on each exam must meet minimum state requirements or the program may face consequences, including suspension or even deregistration (i.e., closure). It is important to note that due to concerns about exam content and implementation, the Board of Regents, informed by EPP faculty and staff as well as NYSED, continues to review the current exam structure that was introduced in 2014. For example, the edTPA task force that was first convened in 2014 is being reconvened in 2016 to review the concerns and issues raised by the field and make recommendations to the Board of Regents.

New preparation programs and revisions to registered programs are reviewed and monitored by NYSED to determine continued alignment with regulations.

In addition to compliance with Commissioner's Regulations for program registration, as mentioned previously, NYSED regulations require that all registered programs be accredited by a recognized professional education-accrediting association, which currently means the Council for the Accreditation of Educator Preparation. In turn,

the U.S. Department of Education holds the state accountable for monitoring the teacher programs. All states report program pass rates to the U.S. Department of Education and are required to develop a rating system for programs to determine those programs that are low performing (U.S. Department of Education, 2013b).

Figure 9 - Certification Exams Required for New York State Teachers and School Leaders

	Previous Exams	Current Exams	Focus of Current Exams
Teacher Education	Assessment of Teaching Skills-Written (ATS-W)	Educative Teacher Performance Assessment-edTPA (Portfolio)	Plan and deliver lessons consistent with NYS Learning Standards and the Common Core
		Educating All Students Test (EAS)	Address learning needs of diverse student populations
	Liberal Arts and Science Test (LAST)	Academic Literacy Skills Test (ALST)	Reading comprehension and analysis, written expression, written analysis
	Content Specialty Tests (CST)	More Rigorous Content Specialty Test (CST)	Mastery of content aligned with NYS Learning Standards and the Common Core
School Building Leader	School Building Leader Exam (Written)	School Building Leader Exam (Including Performance Assessment)	Emphasizes instructional leadership tasks
		Educating All Students Test (EAS)	Address learning needs of diverse student populations

Source: Adapted from the New York State Education Department (NYSED, 2014b)

Accountability Systems for Teachers and School Leaders

To support ongoing evaluation of teacher performance beyond initial preparation, NYSED developed a set of standards (NYSED, 2009) associated with the Annual Professional Performance Review (APPR). These standards, developed with input from a range of constituent groups, make reference to InTASC and NBPT as well as Danielson's (2014) framework. The NYSED standards may also be used in designing professional development programming for practicing teachers, and school districts may use the NYSED standards in preparing district professional development plans each year.

As the mechanism for teacher and school-leader evaluation in New York State, the APPR requires that multiple measures be used for evaluation. Based on these measures, each classroom teacher and school leader receives an overall rating of *highly effective*, *effective*, *developing*, or *ineffective*. While aspects of the APPR are dictated by law, local school districts also must develop and submit for approval their own plans negotiated with the local labor bargaining unit (NYSED, 2015a).

The APPR accountability system has built-in expectations for professional development and requires development of improvement plans for teachers and school leaders who are rated as ineffective. Also, data from the evaluations are to be used to identify professional development offerings for all teachers. It is

important to note that the APPR system continues to evolve in response to concerns raised during its initial development and implementation.

Professional Accountability

One of the hallmarks of a mature profession is the degree to which it monitors itself against a backdrop of recognized professional standards—standards that govern entry into the profession, the schools and curricula that prepare its members, expectations for professional practice and continuing development, and discipline or removal of those who do not meet standards. While accepted professions such as law and medicine have these characteristics, the education profession is still working toward agreement (Hitz, 2008).

One of the hallmarks of a mature profession is the degree to which it monitors itself against a backdrop of recognized professional standards—standards that govern entry into the profession, the schools and curricula that prepare its members, expectations for professional practice and continuing development, and discipline or removal of those who do not meet standards. While accepted professions such as law and medicine have these characteristics, the education profession is still working toward agreement (Hitz, 2008).

Professional Accreditation

The National Council for Accreditation of Teacher Education (NCATE) was founded in 1954 by a consortium of the leading educational organizations involved in establishing standards for teacher preparation, including the American Association of Colleges for Teacher Education (AACTE), the National Association of State Directors of Teacher Education and Certification (NASDTEC), the National Education Association (NEA), the Council of Chief State School Officers (CCSSO), and the National School Boards Association (NSBA). Importantly, it was created to be an independent agency, replacing AACTE as the primary accrediting body to provide a mechanism for assuring quality of teacher preparation (NCATE, 2014).

Initial NCATE standards specified the minimum content to be included and required institutions to provide evidence of that content in their programs. In the 1990s NCATE standards changed to require the articulation of a program conceptual framework together with evidence of having met standards specifying what program completers were able to do—i.e., performance standards.

The Teacher Education Accreditation Council (TEAC) was formed in the 1990s, adopting a slightly different approach to accreditation—one that was more grounded in research and wherein the EPP makes claims about program completers and provides evidence to support such claims. TEAC required programs to meet standards that included a quality-control system, along with evidence of program completers' competence as teachers. The reliability and validity of the evidence of program effectiveness was emphasized.

In 2009, NCATE and TEAC began discussing the possibility of merging the two organizations, along with their accreditation approaches. The current Council for the Accreditation of Educator Preparation (CAEP) and its standards and procedures for accreditation are the result of the merger of the NCATE and TEAC in 2013. Standards for initial teacher-preparation programs were adopted in 2013 and standards for advanced programs, including those for educational leadership, were adopted in 2014. Currently, approximately half of the states have a formal association with CAEP, either through legislation or regulation that requires CAEP accreditation and/or through partnership agreements.

Figure 10 - States Requiring CAEP Accreditation

Require All EPPs to Be Nationally Accredited (13)	Require Public EPPs to Be Nationally Accredited (5)	Require EPPs of Certain Size to Be Accredited (1)
Alaska, Arkansas, Delaware, Hawaii, Louisiana, Michigan, New Jersey, New York, Ohio, Oregon, Utah, West Virginia, Wyoming	Georgia, Mississippi, North Carolina (NC University System), North Dakota, South Carolina	Maryland (EPPs at IHEs with over 2000 FTE students)

Source: Council for the Accreditation of Educator Preparation (2016)

The overarching goal of CAEP accreditation is to assure quality and support continuous improvement of EPPs—for both teachers and school leaders, which will strengthen P–12 student learning. Through CAEP's five standards, programs demonstrate that their graduates are qualified and that the program operates from a culture of evidence and continuous improvement. In preparation for CAEP accreditation and prior to submission of the self-study, institutions with EPPs may select from the following three options for obtaining individual (subject-specific) program review:

- *CAEP Program Review with National Recognition.* Individual programs are reviewed by CAEP and review teams trained by specialized professional associations (SPA) to determine that each program meets SPA standards. This review may result in national recognition by virtue of meeting SPA standards. Examples of SPAs are the Council for Exceptional Children (CEC) and the National Council of Teachers of English (NCTE).
- *CAEP Program Review with Feedback.* Program content is reviewed by site visitors during the CAEP on-site accreditation visit in accordance with the state standards. Feedback is provided to the programs and that state.
- *State Program Review.* A program review is conducted according to the appropriate state program standards.

Following successful CAEP accreditation, programs are held to annual reporting and monitoring requirements. In broad terms, CAEP annually gathers program data on several measures, including indicators of teaching effectiveness; surveys of employer and completer satisfaction; and graduation, certification, and employment rates. This information is seen as useful to programs for continuous improvement, as well as to consumers. While initial accreditation is for a period of five years and continuing accreditation for seven years, annual reports provide additional updates and opportunities for self-examination in the intervening period.

In consultation with stakeholder groups, NYSED is currently considering the adoption of a CAEP partnership agreement that will specify which of the above options will be available to New York State-registered programs, as well as processes for accreditation of New York's EPPs.

Teacher Preparation Analytics

In 2013, as a means to prompt discussion among the profession, CAEP commissioned a report from Teacher Preparation Analytics (TPA) to develop a model for an evidence-based system of teacher preparation that would include

descriptive and performance measures from program admission to beginning teaching (Allen, Coble, & Crowe, 2014). The report proposes key effectiveness indicators (KEIs) that focus on candidate selection (academic strength, teaching promise, and candidate diversity), knowledge and skills for teaching (content knowledge, pedagogical knowledge, teaching skills, and a completer rating of the program), performance as classroom teachers (impact on P–12 student learning, demonstrated teaching skill, and P–12 student perceptions), and contribution to state needs (entry and persistence in teaching, placement/persistence in high needs subject areas and schools) (Allen et al., 2014). Indicators include GPAs, standardized test scores, student and employer surveys, and employment data.

The data garnered through this model would serve two purposes. First, the data from the application of the system could be used by EPPs in their CAEP-mandated continuous-improvement and quality-control systems. The KEIs provide data to use in identifying program strengths and weaknesses so that program improvements can be developed, implemented, and evaluated. The second purpose would be to evaluate the effectiveness of educator-preparation programs for CAEP accreditation. Information on effectiveness can also be used by state education departments in determining continuing program approval and by P–12 schools in making hiring decisions.

The TPA recommendations place emphasis on the use of reliable and valid measures of the KEIs and suggest that many appropriate assessment instruments do not yet exist. For example, to date there is no valid and reliable screening instrument for teaching promise (attitudes, values, behaviors). There is much work to be done by education researchers, test developers, and state education departments before a complete set of KEIs is available for use in educator-preparation program evaluation. And, work has just begun on identifying KEI indicators for school leaders.

Teaching, like other respected professions, must have a universal assessment process for entry that includes rigorous preparation centered on clinical practice as well as theory, an in depth test of subject and pedagogical knowledge, and a comprehensive teacher performance assessment (AFT, 2013).

American Federation of Teachers

In 2013, the American Federation of Teachers (AFT) produced a position paper on the teaching profession. One of the three recommendations supported by the position paper is:

> Teaching, like other respected professions, must have a universal assessment process for entry that includes rigorous preparation centered on clinical practice as well as theory, an in depth test of subject and pedagogical knowledge, and a comprehensive teacher performance assessment. (AFT, 2013, p. 8)

This AFT recommendation matches well the above-mentioned TPA approach to teacher preparation. In a second recommendation in the paper, AFT calls for reliable and valid measures of teacher performance "aligned with a well-grounded vision of effective teaching" (AFT, 2013, p. 8) and agreed on by the various stakeholders involved in education.

Independent Association Program Evaluation Systems

In much the same way that *Consumer Reports* monitors the performance and quality of household products, ostensibly as a "service" to the public, there are numerous independent entities monitoring the performance of higher education institutions

and their programs. *U.S. News & World Report* is probably the most widely recognized, but there are many others, some focusing on particular disciplines, such as *Forbes*' review of business schools and programs. Often such rankings are very transparent, disclosing the methodology and data behind the rankings, and in some cases relying largely on publicly available and/or recognized standard higher education data sets.

The National Council on Teacher Quality (NCTQ), founded in 2000, evaluates EPPs based on its own set of standards for program quality, and it relies extensively on data/information collected through Freedom of Information Law (FOIL) requests. According to its website, NCTQ seeks "fundamental changes in the policy and practices of teacher preparation programs, school districts, state governments, and teachers unions" (NCTQ, 2013). As a self-governing body, NCTQ has developed its own procedures, and, similar to *U.S. News & World Report* and *Forbes*, is not accountable to any formal organization or legal entity. A recent study by Eduventures (2013) concluded that NCTQ has a social change agenda, not a research agenda; it measures its success in terms of identified improvements in teacher-preparation programs, although it provides no indication that such improvements are attributable to its work. NCTQ activities are entirely supported by private funding; no federal government funding is sought or received.

In sharp contrast to the approach advocated by TPA (Allen et al., 2014)—an approach widely endorsed by AACTE, CAEP, CCSSO, the State Higher Education Executive Officers Association (SHEEO), and several state education departments, NCTQ's methodology is characterized by extensive gathering of highly specific program-level details, such as individual course syllabi, required textbooks, and specific assignments. The focus is largely on inputs rather than the performance of graduates or faculty in the program.

School-leader Program Accountability

School-leader programs have two model sets of standards beyond CAEP accreditation from which to define program content and performance assessments: the standards from the Interstate School Leaders Licensure Consortium (ISLLC; see CCSSO, 2014); and the standards for professional learning from Learning Forward (2015).

The ISLLC standards are developed and published by the Council of Chief State School Officers (CCSSO) and the National Policy Board for Educational Administration (NPBEA). Each of the 11 areas comprising the standards (vision and mission, instructional capacity, instruction, curriculum and assessment, community of care for students, professional culture for teachers and staff, communities of engagement for families, operations and management, ethical principles and professional norm, equity and cultural responsiveness, and continuous school improvement) identifies what school leaders should know and be able to do. School-leader preparation programs typically develop coursework and program performance assessments based on these standards. These standards are also used as a basis for NYSED regulations governing the content of school-leadership programs and in the evaluation of programs by CAEP (CCSSO, 2014).

The standards for school leaders developed by Learning Forward (2015) take a different approach to defining what school leaders should know and be able to do. These standards focus on the characteristics of continuous professional learning and describe mechanisms and areas for learning: learning communities, leadership, resources, data, learning designs, implementation, and outcomes. A standards-assessment inventory is published by Learning Forward (2015).

SUNY System Accountability

Operating between state and federal—and institutional—level accountability systems is the SUNY accountability system, as laid out in Board of Trustees' policy and guidance. The SUNY Board of Trustees has authority over all academic programs offered by the University's 64 campuses. Consistent with its statutory mission, SUNY must deliver a comprehensive array of high-quality academic programs (today, numbering roughly 7,300) through a distributed system of campuses and sectors to meet the needs of New York State. Campuses and their programs must comply with all applicable SUNY policies—including, for example, policies related to data transparency, reporting, and accountability; performance planning and assessment; and seamless transfer.

The SUNY provost has the delegated authority to lead the System Administration's oversight of academic program planning and development on behalf of the Board of Trustees. Policies regarding teacher education specify, for example, that programs must ensure that students who are pursuing teaching careers are grounded in the subjects they teach and complete programs that integrate clinical and pedagogical preparation (see *A New Vision in Teacher Education*, SUNY, 2001).

SUNY System Administration's Office of Academic Programs and Planning reviews proposals for new and revised teacher- and school-leader preparation programs. Program proposals are reviewed for compliance with both SUNY policies and NYSED Commissioner's Regulations. New proposals and requests for revisions that do not comply are returned to the campus with suggestions for improvements. Those program proposals that meet SUNY and NYSED requirements are forwarded to NYSED with a recommendation for approval from the SUNY provost.

The SUNY Board of Trustees delineates program assessment and evaluation procedures for all programs through its policy and guidance on assessment, which specifies the assessment of student learning by each campus as well as external review of all programs. The SUNY provost reviews the findings of regional and programmatic accreditation associations. The CAEP accreditation review satisfies the requirement for program-level assessment and external review.

Much to their credit, NYSED and SUNY were early adopters and champions of professional accreditation for EPPs. Going back to the late 1990s, one of the common threads across SUNY's academic strategic-planning process, Mission Review, was the extent to which campuses were moving toward NCATE accreditation. NYSED Commissioner's Regulations of 1999 were supported in SUNY's *New Vision in Teacher Education* policy, adopted by the SUNY Board of Trustees in June 2001. Both actions required teacher and school-leader programs to become accredited by a nationally recognized professional accrediting agency by December 2006. Within the SUNY

system, Buffalo State had been the first institution to obtain NCATE accreditation, which occurred prior to this regulatory requirement. At this point, all SUNY institutions have been granted accreditation through either NCATE or TEAC.

SUNY is a recognized leader among higher education institutions in the area of assessment and accountability, setting comprehensive and rigorous standards of assessment well ahead of the introduction of the assessment standards now seen among regional accrediting bodies such as the Middle States Commission on Higher Education (MSCHE, 2003), the USDOE-recognized accreditation body for New York State higher education institutions. SUNY's current assessment policy, *Streamlining the State University Board of Trustees Policy on Assessment*, adopted in March 2010, intentionally aligned SUNY assessment expectations with regional accreditation standards to avoid duplication of effort and unnecessary burden on campuses and programs (SUNY, 2010a). The SUNY Council on Assessment (SCOA) is advisory to the provost and offers ongoing support and networking for faculty and staff, including training and credentialing in assessment. SUNY was also instrumental in the establishment of the Assessment Network of New York (ANNY) in 2010, a network of professionals that promotes the quality of assessment "to enhance the success of institutions of higher education and their students in New York State" (ANNY, 2010).

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On May 7, 2013, the SUNY Board of Trustees adopted the resolution, *Data Transparency and Reporting* (SUNY, 2013a), which speaks directly to issues of data collection and accountability across the 64-campus system. Each campus, reads the resolution, "shall enhance quality by developing and implementing plans for the regular assessment and review of institutional effectiveness, academic programs and general education." Data, as specified by the system and campus, are to be collected and made as widely available as appropriate. The larger purposes of the resolution were to reaffirm SUNY's longstanding commitment to transparency and accountability, and to respond to the increased requests for publicly available data about each campus that developed during the preceding decade. By committing System Administration to working with campus leadership and faculty and student governance to implement the resolution, the Board underscored its commitment to shared governance as well.

More recently, on January 13, 2015, the SUNY Board of Trustees adopted a resolution, *SUNY Excels Performance System* (SUNY, 2015b), which supported and endorsed SUNY Excels as the University's performance system and key driver for the *Power of SUNY 2020* strategic plan. SUNY believes by acting as a system and by adopting evidence-based best practices, channeling their collective power with a commitment to continuous improvement, colleges and universities can operate at peak performance, and more effectively address our nation's most pervasive challenges.

Campus-based Program Accountability

Campus-based program accountability has, as a primary goal, the provision of a framework specific to the program's design and institution's distinctive mission that supports ongoing program development, assessment, and continuous improvement. This level of accountability is managed not only by education

program faculty, but includes input by other faculty members who contribute to the success of students in the program. The performance indicators are based on standards and design principles that describe what graduates of the program should know and be able to do, including knowledge of content and pedagogy.

These standards should align with the other levels of accountability described above. Students completing an EPP are accountable for performing the skills prescribed by the standards to the level identified by the preparation program, and their post-graduation success should be monitored. While the complexities of student-teacher interactions and the number of variables that could intervene make it difficult to pinpoint the effect of specific program attributes on P–12 student learning, Ginsberg and Kingston (2014) found that a relationship between the two exists. In summary, however, the authors found that while teacher preparation has many accountability measures compared to other professions, these should be used cautiously and one should not assume their validity.

Regardless of the source of standards that underlie the preparation, as mentioned in Chapter 2, programs are best served by considering the elements of effective program design and delivery. Research into core elements of effective preparation programs by Howey and Zimpher (1989) resulted in the identification of 14 characteristics of good preparation programs, including

- a clear conception of schooling and teaching;
- innovative program designs and titles;
- clear and reasonable program goals;
- an academically challenging curriculum with articulated themes;
- a balance among content knowledge, pedagogical knowledge, and experience;
- a cohort delivery model;
- milestones and benchmarks along the curriculum;
- an integrated and interdisciplinary approach;
- adequate time for content assimilation and translation to practice;
- a laboratory component;
- alignment between program and school practices;
- collaboration in teaching between higher education faculty and classroom teachers;
- direct linkage with research and development into teacher education; and
- a plan for systematic program evaluation.

Program design and redesign decisions should be made based on an analysis of the results from multiple measures of student performance. Course grades, comprehensive exams, portfolio assessments using rubrics, and checklists derived from the standards used in designing the program are the typical sources of data. Programs should also establish minimum performance levels, or benchmarks, required for admission, continuation, and successful completion of the program.

Several sources of support internal to the college in which the program resides may exist for program improvement, depending on the significance of the program for the college. An evaluation of the current level of resources relative to the effectiveness of

the program can be done to identify program needs as improvements are identified. Often a reallocation of existing resources is done in conjunction with a review of the internal accountability system to make improvements. Ten-year reviews by the MSCHE provide a formal mechanism for evaluating the campus-based accountability system, including vertical integration of assessment and evaluation. This is particularly important in light of SUNY's view that excellence in educator preparation must be an all-campus, all-university responsibility and commitment.

Overregulation leads to an orientation toward compliance rather than a focus on continuous improvement and excellence.

Summary of TeachNY Advisory Council Discussions and Findings

A number of challenges in the area of evaluation and assessment were discussed. Here again, as mentioned elsewhere in the report, the TeachNY Advisory Council noted a recurring theme of excessive regulation of EPPs and practicing teachers, largely from outside the profession itself, particularly in comparison to other licensed professions. Overregulation leads to an orientation toward compliance rather than a focus on continuous improvement and excellence. As a general rule, professions that embrace strong accountability frameworks *from within* and uniformly apply standards are less susceptible to unnecessary intrusion from outside bodies and organizations. The challenge is to get ahead of external-to-the-profession mandates by creating an evidence-based system of accountability that is transparent and has clear consequences for substandard performance. In this regard, the move toward a single set of standards for all EPPs embodied in the consolidated CAEP standards bodes well for the profession. Similarly, AFT's call for a universal assessment for entry into the profession is another encouraging sign.

While some states have made great strides in creating the sort of integrated P–20 data infrastructures needed to support accountability and excellence, New York State is not among them.

Council members discussed the range of problems around P–20 data accuracy, accessibility, and timeliness—particularly as it pertains to evaluation and assessment of EPPs and teachers. While some states have made great strides in creating the sort of integrated P–20 data infrastructures needed to support accountability and excellence, New York State is not among them, in part because of highly charged political debate over teacher and pupil assessments. Other RTTT-recipient states, such as North Carolina, may offer instructive approaches and systems to emulate.

SUNY's commitment to data accountability and transparency, along with the SUNY Excels performance system, demonstrates system-level commitment to continuous improvement. This context is important for SUNY educator-preparation programs, and the TeachNY Advisory Council was impressed by the intent of the SUNY Board of Trustees (and Governor Cuomo) to couple investment with performance improvements.

SUNY's commitment to data accountability and transparency, along with the SUNY Excels performance system, demonstrates system-level commitment to continuous improvement. This context is important for SUNY EPPs, and the TeachNY Advisory Council was impressed by the intent of the SUNY Board of Trustees (and Governor Cuomo) to couple investment with performance improvements. The Council recognized, and this review reiterates, the challenges inherent in tracking the impact that educator preparation and teacher induction and development have on student learning. The absence of an integrated P–20 data infrastructure in New York State only compounds those challenges. Nevertheless, it is essential that the key constituents (i.e., faculty, higher education institutions and systems, practicing teachers, and school leaders) have access to the evidence that will guide improvement and identify the most relevant elements that result in true excellence in teaching and learning.

Finally, the Council noted the challenges in communicating all aspects of evaluation and assessment, from gathering evidence to interpretation to interested groups. What follows is the set of recommendations for evaluation and assessment (note, too, that some of these recommendations are revisited in Chapter 5).

Recommendations for Evaluation and Assessment

The TeachNY Advisory Council recommends that SUNY:

Recommendation Highlight: **Work with partners—federal and state government, the profession (and its affiliated bodies), and higher education broadly—to support education's transition to a mature practice profession.**

1. Work with partners—federal and state government, the profession (and its affiliated bodies), and higher education broadly—to support education's transition to a mature practice profession. The consequences of status as a mature profession would include a comprehensive framework of accountability with one set of standards for entry, preparation, and practice. In other words, the education profession would embrace

- a single set of broad outcome standards for teacher and educational leader programs;
- a single national licensure examination that tests the basic knowledge needed for initial entry into practice as a teacher or educational leader; and
- a standard set of national examinations that recognize specialization as well as advanced-level practice through board certification.

2. Work with the New York State Education Department to establish a cradle-to-career data set that ensures shared definitions of data, shared reporting expectations, and a shared understanding of the uses of the data to support the goals outlined in this report. In building the data set, the system should engage with a broad range of stakeholders to collect, manage, and report data across the P–12, higher education, and workforce areas.

3. Maintain and affirm its commitment to continued rigorous assessment for programs, using CAEP standards, regional accreditation standards, and relevant SUNY and NYSED policies.

4. Foster a culture of continuous improvement at faculty, program, campus, and system levels that encourages regular assessment of and reflection on data, identifying what works and what does not, and addressing issues that are identified. The assessments will include comparative data, supplied by the SUNY system, of other SUNY programs, as well as those in the state, region, and nation. Participants in such assessments must extend beyond the educator-preparation faculty to include representative faculty from the arts and sciences, social sciences, and other relevant disciplines most closely contributing to EPPs.

Recommendation Highlight: **Develop experimentation zones that allow for innovation and rapid prototyping that might otherwise be constrained by regulation and/or accountability measures… It is important to have both quality assurance and a degree of flexibility in accountability frameworks, coupled with measures of effectiveness, to encourage experimentation and innovation.**

5. Engage a broad range of partners (e.g., New York State Education Department and school districts) to develop effective and reliable feedback and accountability loops in three specific areas:

- EPPs will use assessments of the knowledge and performance of their graduates to inform program development;
- Programs will follow their graduates at specified intervals to gauge the effectiveness of initial preparation and ongoing professional development offerings; and

- Programs will use a commonly developed (with additional questions provided by individual programs) questionnaire that will be sent to program graduates during their fourth year following graduation.

6. Develop experimentation zones that foster innovation and rapid prototyping that might otherwise be constrained by regulation and/or accountability measures. As described previously, it is important to have both quality assurance and a degree of flexibility in accountability frameworks, coupled with measures of effectiveness, to encourage experimentation and innovation.

7. Establish the SUNY-driven TeachNY Center for Educational Innovation, leveraging the considerable research talent and scholarly productivity of SUNY faculty and advanced graduate students across the system, as well as teacher and school leader colleagues in partnership schools, to examine what has and has not worked well in demonstration sites and innovation zones. SUNY's newest Network of Excellence in the Science of Teaching, Learning, and Assessment would be integral to such an initiative.

Recommendation Highlight:
Establish the SUNY-driven TeachNY Center for Educational Innovation, leveraging the considerable research talent and scholarly productivity of SUNY faculty and advanced graduate students across the system, as well as teacher and school leader colleagues in partnership schools, to examine what has and has not worked well in demonstration sites and innovation zones.

"Next in importance to freedom and justice is popular education, without which neither freedom nor justice can be permanently maintained."

—James A. Garfield

The TeachNY Advisory Council heard it from the experts: The schools of tomorrow will be different from what we see today, largely in ways that we can only begin to imagine. New technology will offer myriad opportunities for customized teaching, learning, and assessment, enabling teachers to support individual learner needs more effectively than ever before. Our population will continue to become increasingly diverse, and with that, the expectation for a much more representative teacher workforce. The projected supply of teachers will not be sufficient to meet demand, especially in certain specialty areas. The shift from locally defined standards to national (or even international) standards for both teachers and learners will continue, and education will likely move, albeit slowly, to become a fully mature profession.

Despite all the anticipated change, many of the challenges identified in the Advisory Council's environmental scans and cited in the literature, even from decades ago, will continue to persist if we do not commit ourselves to building the infrastructure that enables and then sustains true transformation toward excellence. It goes without saying, but it's true: New York has many great teachers, and it is home to some of the very best schools in the nation—but the sad reality is that far too many kids never get taught by a great teacher and never attend one of our best schools. Overall, the biggest challenge we face in New York State, much like the rest of the nation, is the challenge of equitable access to excellence in teaching, learning, and assessment.

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At the Advisory Council's May 2015 meeting, Mark LaCelle-Peterson, vice president of the American Association of Colleges for Teacher Education (AACTE), suggested that SUNY is uniquely positioned to spearhead the kind of transformative change that education, overall, sorely needs. He cited many reasons, including SUNY's size and mission; its distributed nature; and the commitment of its leadership, starting at the very top with a chancellor who is one of the nation's leading experts in education. Indeed, these characteristics are the core of SUNY's mission as New York State's public university and the nation's largest comprehensive system of higher education. Moreover, they are part of SUNY's DNA as a university system born out of a number of state teacher colleges, which were, before that, normal schools.

While many of the TeachNY Advisory Council's recommendations boldly challenge the status quo, true transformation will necessitate the creation of a sustainable and collaborative infrastructure that harnesses and coordinates resources from multiple stakeholders and strategically deploys those resources to support the growth and enhancement of educator preparation. SUNY, as a multi-campus system of higher education, has the unique, or enhanced, opportunity to think about

teacher and leader preparation and ongoing development across many campuses and not focus its effort on just one campus or program.

The Advisory Council was charged with responding to the question, "What are the infrastructure needs that would sustain continuous improvement and true excellence in educator preparation?" The following six areas were suggested as guideposts for the infrastructure discussion:

- Leveraging resources—physical, financial, and human capital;
- Effectively employing data for improvement and accountability;
- Ongoing engagement of stakeholders/partners;
- Optimizing communication;
- Incentivizing and supporting research and innovation; and,
- Renewing policy/regulations/laws.

One of the core components of the CAEP national standards is the adoption and implementation of an evidence-based continuous improvement model for program renewal at the institutional level. We believe that a fundamental outcome of TeachNY is to scale up this expectation to the system level, thereby embracing a SUNY-wide commitment to continuous improvement in educator preparation. This approach would mobilize and coordinate the collective power of SUNY to help achieve and sustain transformative change. Scaling from campus to SUNY-wide commitment to continuous improvement would enhance the ability of each program, and all the programs, to improve and renew strategically, according to identified needs in the state as well as their local communities and regions.

It is a ubiquitous refrain: Resources are limited, and challenges do and will continue to exist. State funding for higher education has been largely static, except in a few specific areas of targeted investment, such as federal funding recently awarded through the New York State Education Department (NYSED) to support the TeachNY initiative as well as the development of the SUNY Teacher and Leader Education Network (S-TEN). The infrastructures developed through these efforts can and should be used to support the recommendations of the TeachNY Advisory Council; at the same time, we must also recognize that the funding is targeted and time-limited. Hence, it will not be available as a source of ongoing support.

Moreover, most educator-preparation programs (EPPs) in New York State and across the country have experienced unprecedented levels of declining enrollment over the past decade, largely due to a shifting economy, recent reductions in hiring at the P–12 level, and public assaults upon the teaching profession. We do believe that this trend is shifting and that we will soon see renewed interest in educator preparation, particularly as shortages begin to spread beyond certain regions and certification areas. However, in the near term, lower enrollments are likely to result in decreased funding for programs at the campus level, along with reductions in faculty, instructional materials, and facilities. Finally, challenges inherent in developing and sustaining partnerships with schools, businesses, communities, and NYSED were identified. The kinds of symbiotic partnerships necessary for strong educator preparation must be cultivated and maintained. The Advisory Council acknowledged

both local- and system-level challenges in creating and managing truly robust, meaningful partnerships.

Despite some of the constraints, we believe that SUNY—in partnership with New York State and its P–20 system—is strongly positioned to develop a resource infrastructure that will advance the recommendations put forth in this report and sustain them over time. Most calls for transformation of educator preparation focus on changes that can be made at the programmatic or institutional level, and the resources to support such efforts usually need to be found within a single institution. Granted, such transformations are called for within the context of rethinking educator preparation within a state or across the country, but they rarely focus on the opportunity to collaborate across and among programs. With 16 campuses offering educator preparation and 30 community colleges providing academic pathways into EPPs, SUNY is well positioned to think about an entire ecosystem of educator preparation, not just about how to influence the provision of such programs within the confines of a campus. In fact, the possibility of SUNY's providing a value-added component to the ongoing debate about educator preparation is part of a larger movement nationwide in which systems are moving beyond their roles as allocators, regulators, and coordinators to embracing more strategic activities that:

- promote the vibrancy of individual institutions by supporting their unique missions;
- focus on smart growth by coordinating the work of campuses to improve access, control costs, and enhance productivity across the system; and
- leverage the collective strengths of institutions to benefit the states and communities served by the system (Lane, 2013).

The possibility of SUNY's providing a value-added component to the ongoing debate about educator preparation is part of a larger movement nationwide in which systems are moving from allocators, regulators, and coordinators to embracing more strategic activities that promote the vibrancy of individual institutions; focus on smart growth; and leverage the collective strengths of institutions to benefit the states and communities served (Lane, 2013).

Indeed, Chancellor Nancy Zimpher has recently called for a more focused effort around the concept of "systemness." Briefly, SUNY systemness refers to the opportunity to focus SUNY's collective resources more directly and obviously on the needs of New York State (Zimpher, 2013). From its inception, TeachNY was conceived as a project that would generate recommendations for enabling policy that would support improvements in educator preparation across the system, and, indeed, the state. TeachNY is an opportunity for SUNY to demonstrate systemness by coordinating the delivery of educator preparation and identifying the system-wide supports necessary for improvements in educator preparation that will positively impact student learning.

We see this systemness occurring both horizontally and vertically. Horizontally, collaboration occurs by harnessing the resources across EPPs and entire campuses. Many campuses have dedicated resources to support their own EPPs. Moreover, campuses across SUNY have other resources that can support research, assessment, and development of teaching, learning, and leadership. We believe there is great advantage, discussed below, in harnessing these resources from across the entirety of SUNY to collectively benefit and improve educator preparation. Vertically, EPPs exist as part of a pipeline that extends from cradle to career. Colleges, in particular EPPs, admit students who are products of the P–12 system. These programs also prepare the teachers and leaders who will eventually work in the schools that will prepare the graduates of tomorrow. Across this entire continuum exist stakeholders

with resources that can be brought to bear on improving educator preparation. As we explored the issue of identifying a sustainable infrastructure, we did so with the idea that such resources need to be identified across both the horizontal and vertical axes, and a compelling case made for optimizing their deployment.

The remainder of this chapter establishes the context in which we examined the issue of resources and proposes a set of recommendations designed to ensure that the recommendations set forth elsewhere in this document are implemented and endure over time. What follows are the particular resource issues that we examined in the six guideposts, along with the specific recommendations for each.

I. Leveraging Resources – Physical, Financial, and Human Capital

A key aspect of systemness is leveraging resources across multiple stakeholders. The benefits are twofold: First, savings can be realized through shared services and economies of scale, with the savings then available to reinvest in the types of efforts detailed in this report; second, thinking of the collective resources of each stakeholder as part of an expanded system infrastructure, rather than one isolated campus or one specific stakeholder group, provides a large resource pool that extends far beyond what any one entity could provide on its own.

In spite of the ubiquitous refrain about lack of resources, New York State, in fact, ranks at the top nationally with $19,818 in per pupil spending for P–12 education. As the Advisory Council members read in their May 2015 meeting packets, New York supports over 700 school districts, 37 BOCES with 12 RICs, 125 Teacher Centers, and two of the largest public higher education systems in the country, SUNY and CUNY. And New York State is a major provider of the country's teacher workforce, having prepared a high proportion of teachers working in other states. In SUNY alone, we have tens of thousands of faculty and staff members, currently numbering over 80,000; more than half a million students; and over $1 billion in annual research expenditures. With 103 million square feet of physical facilities, and a SUNY campus within 30 miles of every NYS resident, SUNY's physical presence is felt by every New Yorker. Through Open SUNY, we have the largest online network of faculty support, including more than 1,000 Center for Online Teaching Excellence (COTE) faculty fellows devoted to honing their skills in the use of technology to support excellence in teaching and learning.

SUNY's system-level challenge for which infrastructure is needed is to coordinate the individual campus-level continuous-improvement systems through policy that specifies both the areas on which each program should focus and the specific ways in which the system will support work on improvement in those areas. While there may be a diversity of opinion regarding the areas that should be the focus of continuous program improvement, most agree that there is a need for ongoing improvement in the way that SUNY EPPs recruit, prepare, and support teachers and leaders. SUNY as a system has the opportunity to leverage the full power of its systemness to realize greater improvements than might not be realistically achievable at each individual campus on its own. And this challenge extends beyond SUNY to the entire P–20 system in New York State and its associated partners.

In short, SUNY and New York State have a vast array of resources but little in the way of system-level coordination to leverage those resources—resources that must be brought to bear in the most efficient, targeted ways possible on the persistent challenges described throughout this report.

A *braided funding* approach to supporting initiatives among multiple systems was mentioned in Advisory Council discussions. Briefly, braided funding involves identifying multiple funding sources to underwrite a project supported by multiple constituencies (Spark Policy Institute, 2011). The funding streams remain separate for accounting purposes but are comingled to provide the necessary financial resources for the project's budget. Since multiple constituencies are involved, each responsible for some part of the total funding, an intermediary among the partners is recommended to ensure coordination (National Collaborative on Workforce and Disability, 2006). Braided funding has been a popular funding approach in social service agencies (Nicholas, Kauder, & Krepcio, 2011).

Recommendation Highlight: **Implement braided or fused funding to further strengthen the resource base to support excellence in educator preparation and ongoing professional development of teachers and leaders.**

Recommendations for Resource Infrastructure

SUNY should:

1. Work with New York State to bring together—in very intentional ways (focused on our shared challenges)—New York's 700+ locally governed school districts with higher education under one P–20 "banner" to establish an environment of greater cooperation and coordinated direction, both statewide and regionally.

- Implement braided or fused funding to further strengthen the resource base to support excellence in educator preparation and ongoing professional development of teachers and leaders.
- Target funding specifically to support rapid prototyping of innovative educator preparation and professional development (including clinically rich simulations and residencies).
- Identify and allocate funding (in the form of grants, loans, and scholarships) to attract a strong pool of highly capable students from diverse backgrounds into education, possibly through a public service campaign that encourages young people to pursue teaching and school leadership.
- Effectively deploy successful "graduates" of the NYS Master Teacher Program, by establishing a Master Teacher Academy—the first of its kind in the nation—a corps of dedicated teachers and leaders willing to serve as expert advisors and mentors, supporting pre-service and developing teachers and leaders and simultaneous renewal.

Recommendation Highlight: **Create an umbrella or coordinating structure—the TeachNY Center for Educational Innovation.**

2. As part of its all-university commitment, leverage its 64-campus, geographically distributed physical presence to extend the reach and impact of SUNY's educator preparation and professional development.

3. Create an umbrella or coordinating structure—the TeachNY Center for Educational Innovation—to more effectively leverage resources and partnerships, including SUNY's four regional Centers of Innovation at Buffalo State, New Paltz, Cortland, and Albany; to promote excellence and innovation across all SUNY EPPs;

to attract external support and funding; and to raise the visibility of SUNY's programs, research, faculty, graduates, students, and partners.

II. Employing Data for Improvement and Accountability

We are in the midst of an intense educational accountability movement across the state and nation, ostensibly focused on data collection and analysis for making decisions about instruction. CAEP accreditation requires extensive data collection and analysis of student performance and program outcomes. New York, like many other states, is increasingly holding EPPs accountable for the performance of their graduates on state certification exams and, subsequently, the success of students taught by those graduates. And SUNY has recently launched its own performance system, SUNY Excels, to hold itself accountable in its mission-critical areas of access, completion, student success, inquiry, and engagement. The common vision around these data-collection efforts is that through data analysis we can both identify areas for improvement as well as provide evidence of areas of excellence and effectiveness.

Key to educator preparation excellence is establishing the data collection infrastructure to support accountability and continuous improvement. Here again, SUNY has an array of existing resources, including its network of institutional researchers (Association for Institutional Research and Planning Officers, or AIRPO), its highly esteemed policy research unit, the Rockefeller Institute of Government, a body of researchers and data scientists throughout the system, and its own system Office of Institutional Research, to work with NYSED and other partners to create the integrated data structure New York State needs. The need for data access is urgent. New York State is sitting on a mountain of data, but the data are messy and walled off. The TeachNY Advisory Council affirmed the importance of and shared responsibility for building such infrastructure, which should be open to researchers, practitioners, policy makers, and administrators, as well as the general public.

Recommendations for Data and Accountability

SUNY should:

1. As called for in Chapter 4, work with New York State to build a fully integrated P–20 data system, modeled after successful data initiatives seen in other RTTT-recipient states.

- In partnership with NYS, establish a governance system for the P–20 data system that enables timely, accessible, and high-quality data to support program evaluation, improvement, and development across P–20, while also ensuring appropriate use and proper safeguarding of sensitive information.
- Work with partners in New York and other states to launch an educational data consortium that provides access to state-to-state comparative data, for benchmarking purposes and continuous improvement.
- Leverage SUNY faculty and staff expertise in data science, institutional research, evaluation, and measurement to support more effective use of P–20 data for improvement.

- Collaborate with NYSED on its effort to develop statewide, system-level, and campus-level educator preparation reports that track the performance of EPPs on a variety of indicators, including enrollments, retention, completion, placements, and performance on licensure exams. Such reports should include qualitative information about the nature of the EPPs to provide readers with an understanding of the design principles of each program and properly contextualize the data.

III. Engaging Stakeholders and Building Partnerships

New York State has a complex array of infrastructure in the form of schools, districts, BOCES, Teacher Centers, P–12 teachers and leaders, higher education institutions and their faculty and students, researchers, regulation, and so on, but little in the way of infrastructure to effectively support durable partnerships and shared responsibility among and across these groups. Colleagues in the health professions lament the fact that they work in teams but train in silos. In education, we tend to train in silos and work in silos. This situation is at odds with networked improvement communities (see Bryk, Gomez, & Grunow, 2011). As Howey (2011) notes, "networked improvement communities and their rapid prototyping are grounded in the principle of shared and equal partnerships."

Furthermore, as Wise (2007) notes,

> Schools must be redesigned around principles adopted from the organization of professionals working in the 21st century. Professionals do not work alone; they work in teams. Professionals begin their preparation in the university but do not arrive in the workplace ready to practice. They continue their preparation on the job. (p. 59)

Wise points to fields such as medicine, law, and architecture, where professional services are provided by a *team* of professionals—novices to experts—working together. The most senior professionals create the structure, supervise, and step in as needed. The novices do much of the work, but they are supervised—first very closely, less so over time. Wise outlines some of the ways in which the exact same financial resources can be deployed to support more effective educational teams; teams that successfully leverage P–20 partnerships, with shared responsibility for excellence in educator preparation, research, teaching, and learning. He suggests such teaching teams "could operate especially effectively in professional development schools (PDSs), alliances of colleges of education and public schools, which strengthen initial teacher preparation and continuing professional development" (p. 62), along the lines described in Chapter 3 of this report.

The NYS Master Teacher Program provides another opportunity for strengthened partnerships. As of September 2015, 625 of the best current STEM teachers in grades 6–12, representing all ten regions of the state, have been named NYS Master Teachers. The Master Teachers have been engaged in the work of the TeachNY Council throughout its deliberations and have indicated their willingness—as a collective—to support the implementation of the ideas and recommendations, including program development and direct instruction in classrooms and in the field, and active participation in research, evaluation, and assessment, etc. They are

asking for a stronger presence in their schools on the part of higher education institutions and are particularly interested in the role that SUNY and others could play in professional development offerings that support excellence in teaching and leading.

Recommendations for Engaging Stakeholders and Building Partnerships

Recommendation Highlight: **SUNY should build upon already established S-TEN higher education/P–12 partnerships to dramatically expand and deepen its engagement with P–12.**

1. SUNY should build upon already established S-TEN higher education/P–12 partnerships to dramatically expand and deepen its engagement with P–12, with shared responsibilities specified in memoranda of understanding, thereby increasing its impact on hundreds of thousands of current and future P–12 students, as well as their teachers and school leaders.

Recommendation Highlight: **Similar to U.S. teaching hospitals' obligation to support graduate medical education in the form of residency programs and research, and to train professionals across the allied health spectrum, in partnership with SUNY and other higher education institutions, New York State should establish differentiated funding to support designated districts and schools for the purpose of educator and leader residency programs.**

2. Similar to U.S. teaching hospitals' obligation to support graduate medical education in the form of residency programs and research, and to train professionals across the allied health spectrum, in partnership with SUNY and other higher education institutions, New York State should establish differentiated funding to support designated districts and schools for the purpose of educator and leader residency programs. Districts and schools would vie for this designation, as it would be tightly connected to higher education's resources—its faculty, students, and research—and there would be higher levels of state funding to support these training obligations.

IV. Optimizing Communication

The value of continuous-improvement communities can also include the coordination of resources from multiple stakeholders. One of the greatest assets of SUNY's size and structure is its capacity to serve as a disseminator of practice and data and as a facilitator of cutting-edge research to inform policy and practice. We believe that SUNY has an opportunity to leverage its technology to create networked communities of practice, both physical and virtual. SUNY has just begun to pilot a new electronic SUNY Educator Preparation Repository and Online Resource Center. Rubrics are being developed and used to evaluate teaching strategies through a peer-review process. At present, more than 150 examples of best practices are being shared across the SUNY system and beyond, enabling adaptation, scale-up, and continuous improvement.

The long-term success of this initiative will depend on communication and dissemination of information being a top priority. And two highly regarded research entities—SUNY's Rockefeller Institute of Government and the Evaluation Consortium at the University at Albany—will be invaluable partners and resources in communications and publications, and in guiding our decisions in bringing practices to scale across the system, state, and nation.

During his presentation to the TeachNY Council, Ken Wagner, then senior deputy commissioner of the NYSED, advocated for the development of Networked Improvement Communities (NICs). Briefly, the rationale for the NIC is that given variability in contexts, research efforts can be enriched by focusing on the same research questions in different settings using different research strategies. The results of these studies are then combined, with the expectation that new insights might be

realized that can be generalized to a broader population, making implementation of improvements to scale more appropriate and more effective. Bryk and colleagues (2011, 2015) suggest that NICs have the advantage of being able to address complex issues through research compared to single person or group efforts.

Wagner suggested the inclusion of the resources of BOCES and RICs across the state, along with those of NYSED, higher education, school boards, school administrators, and teachers. Small groups constituted from representatives from these groups could then innovate, research the innovations, and report the results. SUNY might partner with NYSED to provide resources such as funding and technology.

Recommendations for Optimizing Communication

SUNY should:

1. Under the umbrella of the TeachNY Center for Educational Innovation, regularly communicate about new advances in education and the many spectacular achievements on the part of New York's teachers and leaders, and SUNY faculty, staff, and students—using the full range of media: from radio to Twitter, to blogs and weekly newsletters (along the lines of *Chalkbeat*).

2. Leverage the Rockefeller Institute of Government's national standing and expertise in hosting public forums on the most pressing issues of the day to develop a TeachNY Center series of talks, debates, and panel presentations, bringing together state and national experts and policy makers.

3. Partner with NYSED and sister higher education institutions to educate residents of New York about the state's incredible assets in terms of educator preparation.

4. As part of the communication strategy, continue to build upon the online Educator Preparation Repository—to disseminate best practices, new discoveries, technologies, and techniques, as well as tested products, and to invite open comment and critique from the larger education community to foster a highly valued, peer-reviewed, networked improvement community resource.

Recommendation Highlight: **Under the umbrella of the TeachNY Center for Educational Innovation, regularly communicate about new advances in education and the many spectacular achievements on the part of New York's teachers and leaders, and SUNY faculty, staff, and students—using the full range of media.**

Recommendation Highlight: **Continue to build upon the online Educator Preparation Repository—to disseminate best practices, new discoveries, technologies, and techniques, as well as tested products and, to invite open comment and critique from the larger education community to foster a highly valued, peer-reviewed, networked improvement community resource.**

V. Incentivizing and Supporting Research and Innovation

SUNY's research expenditures across a wide spectrum of disciplines, involving all campuses and sectors, total more than $1 billion per year. Out of this total, roughly $70 million is related to education, including $35 million specifically focused on the science of teaching, learning, and assessment. Faculty researchers at SUNY's campuses are conducting studies sponsored by such organizations as the U.S. Department of Education, the National Science Foundation, and the Brain and Behavior Research Foundation. Recently funded studies include "Efficacy of the Interactive Strategies Approach – Extended as a Small Group Intervention for Intermediate Grade Struggling Readers," "Collaborative Research: Transfer of Learning from Touchscreens During Early Childhood," and "Collaborative Research: Education Policy Studies – Empirical Research: Urban High School Opportunity Structures, Figured Worlds of STEM, and Choice of Major and College Destination."

SUNY has put in place a number of initiatives aimed at leveraging its resources and promoting systemness. Examples are described below.

SUNY Innovative Instruction Technology Grants (IITG)

Over the past four years, the SUNY Innovative Instruction Technology Grants (IITG) program—a university-wide, state-funded initiative—has awarded more than $2.8 million to support 133 projects. The initial goal of the program was to promote systemness by encouraging multiple campuses to engage in innovative collaborations with "technology in service of pedagogy." Subsequent RFP refinements have focused efforts to launch and develop Open SUNY. While teacher preparation was not explicitly mentioned in the most recent IITG RFP, more than a quarter of the projects align with TeachNY Advisory Council findings and recommendations.

All IITG outcomes are openly shared in order to inform future research, via the Open SUNY Learning Commons. Themes such as "assessment, understanding and monitoring of student progress," "connected learning models," "instructional design," "instructional technologies," "organizational issues: teaching and learning," "faculty development," and "discipline-specific pedagogy" enable IITG outcomes to be more discoverable. Within the broad theme categories, sub-headers (e.g., e-portfolio, online learning, faculty development, etc.) describe emerging and contemporary issues in higher education as guided by EDUCAUSE, the New Media Consortium, and a small northeast consortium of innovation administrators, the Collective for Academic Innovation and Transformation.

SUNY Network of Excellence: Science of Teaching, Learning, and Assessment (TLA)

A second effort aims to further leverage SUNY's already substantial research strengths found primarily at individual campuses throughout the system. Two years ago, SUNY established its Networks of Excellence to encourage inter-campus and inter-disciplinary inquiry and research in several key research areas. In the same way that the preparation of teachers and leaders requires faculty members from multiple disciplines to come together to ensure that students understand both the appropriate content areas and the science of pedagogy, the most pressing scientific questions affecting teaching, learning, and assessment require examination by networks of researchers—teams of researchers not bound by traditional disciplines or institutional barriers.

The sixth of the six Networks of Excellence focuses specifically on the science of teaching, learning, and assessment. This effort dovetails with Open SUNY and its engagement of more than 1,000 COTE faculty fellows, the IITG program, and other system- and campus-level initiatives, to apply innovative approaches, assess learning outcomes, and improve access, completion, and success in public higher education in New York State. SUNY TLA will leverage this existing infrastructure and will take it one step further in pursuit of external funding and external partners to lead SUNY to national preeminence as *the* solutions center, delivering research-based practices that enable learning in the most effective manner. Critical to the success of each one of the Networks, including TLA, is effectively linking researchers to one another. The Open SUNY Learning Commons is becoming an increasingly recognized and valued platform for such collaboration.

These initiatives are intended to bring researchers and education partners together to achieve greater success and test out new approaches to technology. The catalyst to spurring research and innovation often comes in the form of a big challenge—a Sputnik-type challenge—that galvanizes the entire community around a shared purpose. Addressing equity through science; promoting true excellence in educator preparation; preparing teacher heroes for tomorrow's students, coupled with aggressive goals such as doubling the graduation rates in New York State's "failing" high schools—these are the sorts of high-aim goals that SUNY and its partners might adopt to mobilize the full force of its system to meet our most persistent challenges.

Recommendations for Research and Innovation

SUNY should:

1. In the context of SUNY Excels, embrace a limited set of SUNY goals for excellence related to P–20 education, and work hand-in-hand with one another (and our partners) to promote network improvement in educator preparation.

2. Fully operationalize the SUNY Teaching, Learning, and Assessment Network of Excellence, focused on the "science of education" and designed to conduct deep, probing research into academic pedagogy and promote experimentation with new models of educational delivery. As part of this operationalization, SUNY should also strategically engage researchers from outside the discipline of education to become active in the Network.

3. As part of the TeachNY Center for Educational Innovation, build a state-of-the-art teaching demonstration laboratory where researchers come together, work side by side, and develop and test new ideas, technologies, and transformative approaches.

4. Beyond traditional federal and state sources, collaborate with business and industry, as well as foundations, to expand sponsorship of teaching, learning, and assessment research. Explicitly invite deep participation from a broad range of P–12 partners, including teachers, leaders, students, SUNY alumni, and NYS Master Teachers and program alumni.

5. Leverage the Rockefeller Institute of Government's strength and reputation in policy research to give more focused attention to the policy implications of teaching, learning, and assessment research findings.

VI. Renewing Policy and Regulations

It is only fitting that the last section of the last chapter of this report brings us right back to the beginning—the TeachNY Advisory Council's charge to offer recommendations for bold, utterly transformative new policy. While policy is perhaps the most durable of all types of infrastructure, it is truly a double-edged sword. There is definitely the risk of too much of a good thing when it comes to policy and regulation; once erected, it is very difficult to change or dismantle, in large part because it is a vehicle for control.

Recommendation Highlight:
In the context of SUNY Excels, embrace a limited set of SUNY goals for excellence related to P–20 education, and work hand-in-hand with one another (and our partners) to promote network improvement in educator preparation.

Recommendation Highlight:
As part of the TeachNY Center for Educational Innovation, build a state-of-the-art teaching demonstration laboratory where researchers come together, work side by side, and develop and test new ideas, technologies, and transformative approaches.

Recommendation Highlight:
Leverage the Rockefeller Institute of Government's strength and reputation in policy research to give more focused attention to the policy implications of teaching, learning, and assessment research findings.

To innovate, an organization needs to review and rethink its strategies and structures, and challenge the organization's status quo. Policy can, indeed should, be written to enable and foster innovation. An additional aspect of the vision related to improving educator preparation is that the system is a learning organization (Senge, 1990; Weerts, 2013). Becoming a learning organization involves moving from reacting to changes in the environment to creating innovative strategies and structures to address identified needs.

Becoming a learning organization involves moving from reacting to changes in the environment to creating innovative strategies and structures to address identified needs.

Policy should enable institutions and their members to reach larger goals. The TeachNY Advisory Council spoke repeatedly about the problem of too much regulation and too much oversight from outside the profession—the burdensome, layered web of standards and expectations that can sap energy and thwart innovation.

That is why this project is so important: If we don't take the time to examine the challenges, develop a shared vision with specific goals, and then craft enabling policy to help us achieve the shared vision and goals, we will be left with little more than a large set of checklists, forms, audits, and memoranda that ultimately drive talent away. The TeachNY Council recommended, again and again, the adoption of flexible policy (and regulatory) frameworks—frameworks that set general standards (focused largely on outcomes) across the board, but allow for local flexibility to encourage individual creativity, transformative leadership, and experimentation and innovation. That is the overall thrust of what the Advisory Council recommends. But first, SUNY and its partners need to think hard about the big goals—shared goals that transcend disciplines and education sectors—and then craft the policy framework needed to support goal achievement. The TeachNY Advisory Council's findings and recommendations throughout this report are intended to support that effort.

The TeachNY Council recommended, again and again, the adoption of flexible policy (and regulatory) frameworks—frameworks that set general standards (focused largely on outcomes) across the board, but allow for local flexibility to encourage individual creativity, transformative leadership, and experimentation and innovation.

Recommendations for Renewing Policy and Regulations

1. Continue to convene the TeachNY Advisory Council or another such body to engage internal and external stakeholders along with outside experts from across the country in support of SUNY's educator-preparation transformation efforts. As appropriate, invite Advisory Council members to provide additional support in targeted areas identified as most critical to continuous improvement and excellence.

2. Once the TeachNY policy framework is established, commit to regular examination and renewal, including an annual TeachNY report that highlights progress made as well as ongoing challenges and opportunities for further improvement.

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Appendix A: Summary of Recommendations

Chapter 1 – Excellent Candidates

Recommendations for Addressing Public Perception (pg 16)

1. Working with P–12, New York State, business and industry, SUNY should launch a public service campaign to dispel myths and misconceptions about the profession; raise the visibility of great teachers and great teaching; put a spotlight on the many teacher heroes; and identify the breakthrough research and innovation that are quickly changing the way in which teaching and learning occur.

2. Enlist distinguished teachers at local levels across NYS, especially SUNY alumni in the field, to help identify and recruit promising potential teacher candidates.

Recommendations for Enhancing Academic Excellence (pg 20)

1. Fully implement the SUNY Board of Trustees' policy on educator-preparation program admissions selectivity and monitor its impact.

2. Develop comprehensive system-wide and campus-specific recruitment strategies by which arts and sciences (and other disciplines) and education faculty and administration share responsibility for attracting strong candidates, encouraging excellent students with promise to consider a career in teaching.

- Work with P–12 teachers and leaders to establish teaching academies that inspire and encourage middle and high school students to explore teaching as a career.
- Work with NYS and NYSED to design, develop, and fund a fellowship program for outstanding teacher educator candidates, similar to the North Carolina Teaching Fellows program.
- Make an informational network available to students and advisors that brings together in one place all relevant financial aid information that is designed to support educator preparation, including grants, state and national scholarship programs, and subsidized loan and loan-forgiveness programs, and ensure that the information is accurate and widely distributed.

Recommendations for Enhancing Diversity (pg 25)

1. Develop a comprehensive recruitment plan with system-wide and campus-specific recruitment strategies to substantially increase the diversity of educator-preparation students by

- leveraging the SUNY Welcome Center in New York City to substantially increase the diversity of the applicant pool for educator-preparation programs;
- working with P–12 partners, including NYS Master Teachers, to strengthen recruitment and retention strategies specifically designed to enhance diversity;
- bringing to scale highly effective programs, such as Educators Rising and Today's Students, Tomorrow's Teachers (TSTT), which have track records of success with local communities;
- developing clusters of courses, such as those in current first-year residential/academic affinity groupings, designed to attract and retain students of color in their first year;
- working directly with on-campus and campus-related programs that effectively serve at-risk and minority populations, such as Upward Bound, the EOP, and the McNair Scholars Program; and
- working directly with regional community colleges to enhance the recruitment and seamless transfer of students into SUNY baccalaureate education programs.

2. Ensure that the financial needs of students with lower socioeconomic status are being met by effectively mobilizing all available campus, state, and federal financial aid resources.

3. Create a pilot Urban-Rural Teacher Corps (URTC) that recruits and selects applicants who are committed to and appreciative of high-needs urban and rural school communities. The curriculum will enhance the development of knowledge, skills, and aptitudes necessary for success in these environments and appeal to students who are committed to working in urban and/or rural districts.

Recommendations for Recruiting and Selecting for Cultural Competence and Other Qualities (pg 27)

1. Leverage SUNY research strengths, especially in the area of measurement and evaluation, to develop and implement valid formative assessments of cultural competence and other qualities, and to support the admission and retention of excellent teacher and leader candidates.

Recommendations for Meeting Market Needs (pg 29)

1. In partnership with New York State, NYSED, the U.S. Departments of Education and Labor, and localities, provide prospective and enrolled students and faculty members with the most up-to-date labor supply-and-demand projections.

- Create advisory boards for all educator-preparation programs to maintain the flow of information on current and emerging local and regional teacher and leader needs.
- In partnership with New York State and localities, create pilot programs modeled on the New York City Teaching Fellows program.

Chapter 2 – Excellent Educator Preparation

Recommendations for Curricular Design (pg 37)

1. Design educator-preparation programs that are guided by a clear conceptual framework; support the mastery of content knowledge and pedagogical skills in an integrated fashion; and have educational milestones that recognize a student's successful performance in academic and clinical engagements.

2. Empower campuses to be flexible and innovative so they can schedule and structure classes, labs, and field experiences to make educator-preparation programs more attractive and accessible to diverse candidate populations. This strategy may include more effective use of summer and other intermediary breaks/terms, developing additional five-year programs leading to master's degrees, and identifying multiple paths to certification without shortchanging candidate preparation.

3. Infuse experiential learning and analytical skill-development activities to create teachers and leaders who are data-based problem solvers, innovators, and change agents. EPPs should better apply problem-based learning, case-based learning, and experiential-learning opportunities, infused with research and analytical skill development, to transform the curriculum of education schools.

4. Develop mechanisms to create a shared vision for EPPs and ensure that students have a seamless educational experience between their content and pedagogical areas. This recommendation includes engaging P–12 leaders and educators, liberal arts and sciences and humanities faculty, and school of education faculty to develop standards of shared responsibility and accountability; create shared leadership over budget, personnel, and programmatic priorities; and assess and recognize differentiated contributions of participating faculty and departments.

5. Establish experimental education units (e.g., regulation-free zones) that develop and test innovative educator-preparation designs. This strategy could include competency-based education, simulations, gaming, adaptive learning, blended programs, time-variable instruction, modular programming, technology use, flipped classrooms, innovative staffing, badging, and micro-credentialing. In these zones, both the pre-service teacher and mentor teacher are engaged in deep, collaborative, and experimental learning.

6. Implement teacher-education residency programs. These programs would be similar to what has been developed in the medical field and would provide teachers the opportunity to gain in-depth training within the classroom after they have completed all the other requirements for their degree. The resident teacher would run his or her own classroom, but would be under the supervision of a NYS Master Teacher, a National Board-certified teacher, or a teacher with similar qualifications and recognition.

7. Develop and implement high-quality nontraditional pathways and differentiated content-delivery systems to teacher and leader certification that expand access to preparation programs. Such programs and delivery models would attract traditional students, as well as those who have had other careers and or have other responsibilities that preclude them from pursuing traditional pathways delivered through traditional means.

Recommendations for Clinical Experience (pg 41)

1. Incorporate frequent clinical and field experiences. This strategy includes planning for and receiving feedback from various mentors throughout the preparation experience, from the earliest courses through intensive clinical experiences, possibly including a residency program.

2. Carefully select clinical mentors (preceptors) for alignment with program objectives. These mentors should be employees of partner schools engaged in simultaneous renewal with the EPP. A broad and extensive experience background is preferred; experience in action research is essential.

3. Provide opportunities for pre-service students to engage in simulated classroom environments. This may include microteaching, virtual simulation, live experience, and others.

4. Develop mechanisms to ensure the full engagement of all faculty—P–12, education, and liberal arts and sciences—in clinical experiences and raising the stature of the clinical experience. This approach should include implementing rewards for pre- and post-tenure faculty and should consider granting of academic rank to P–12 and higher education clinical faculty.

5. Leverage SUNY's statewide presence to provide students the opportunity to engage in field experiences in high-needs areas, such as rural and urban districts, using the SUNY Urban Teacher Education Center (SUTEC) model.

Recommendations for Simultaneous Renewal and Sustainable Partnerships (pg 42)

1. Create regional advisory boards for educator preparation that include P–20, business, and community leaders and representatives, and provide regular and ongoing forum(s) for these boards to convene around educational improvement. With the goal of creating and sustaining simultaneous renewal, these boards should be charged with aligning priorities and resources, determining community goals, and examining workforce trends (within and outside of teacher education), to determine how these findings might guide educators and EPP improvements.

2. Establish and maintain partnerships between school districts, EPPs, Boards of Cooperative Educational Services (BOCES), community organizations, and higher education institutions that provide for activities that support simultaneous renewal.

3. Facilitate ongoing and regular educator exchanges, such as teachers-in-residence and professors-in-the-classroom, to provide opportunities for post-secondary faculty and P–12 teachers and school leaders to spend a semester integrated into the educational fabric of the other sector.

Chapter 3 – Excellent Professional Support

Recommendations for Induction (pg 46)

1. New York State should support every beginning teacher's participation in and completion of a robust, high-quality induction program of no less than two years during the initial years of practice.

2. New York State should establish a flexible framework for induction programs and allocate the necessary funds to support a set of essential evidence-based components across all programs, as well as options from a menu of possible elements, to accommodate local context, priorities, and needs.

3. P–12 schools, districts, BOCES, Regional Information Centers (RICs), and Teacher Centers should engage higher education institutions/systems and their EPPs in the ongoing development, implementation, and evaluation of induction programs.

4. SUNY—as a system, as networks of campuses, and as individual campuses and faculty members—should commit to being an active partner with schools and districts in creating co-learning communities to support successful teacher induction, building on core elements of pre-service preparation.

5. To support network improvement communities around induction, SUNY should work with its P–12 colleagues to support research and analysis on top-performing practices and their associated policies—internationally, across the United States, and in New York—and scale up as appropriate.

Recommendations for Continuing Professional Development (pg 48)

1. Provide appropriate/differentiated supports and resources across the continuum of professional development, from novice to expert teachers, including expanded support for National Board certification.

2. Provide opportunities and support for P–12 teacher research, including joint projects among faculty members, teachers, candidates, and students.

3. Enhance higher education faculty access to professional development presented to teachers and school leaders. This could involve a professors-in-the-classroom type program.

4. Leverage Open SUNY's online capacity and highly regarded faculty development infrastructure, including its recently established Center for Online Teaching Excellence (COTE)—a learning community that includes over 1,000 fellows committed to excellence in the use of instructional technology, the *Online Teaching Gazette*, and numerous other instructional technology resources—to support novice through expert teachers and leaders throughout New York State.

Recommendations for Teacher Leadership (pg 51)

1. Recognize and support leadership in the form of service to the profession—at the local, state, and national levels—as an essential feature of a mature profession.

2. Embed principles of effective leadership into both pre-service and professional development curricula, and redesign teacher and school-leader programs to prepare teachers and school leaders together.

3. Work in partnership to establish school environments that promote highly effective recruitment, retention, induction, and ongoing professional development of school leaders, with particular attention paid to high-poverty schools and districts.

- Create virtual communities and connecting hubs for teacher leaders across New York, and support their professional development with micro-credentialing and other such tools.

- Support peer-visitation teams for formative evaluation and development of highly effective school leaders.

Recommendations for Partnerships and Professional Learning Communities (pg 54)

1. Establish a single integrated system of educator development between universities and school districts, BOCES, Regional Information Centers, and NYS Teacher Centers, to leverage expertise and resources across P–20 sectors.

- Endorse and assume shared responsibility for the continuum of learning and development, from pre-service, to induction, to ongoing professional development, based on the needs of individual teachers and leaders, local districts, regions, and beyond.
- Establish evidence-based standards and adequate fiscal support for strong and enduring partnerships, to be regularly reviewed by SUNY (system with campus leadership and faculty), P–12 partnering schools and their faculties, teacher unions, and NYSED, with attention to the most appropriate level of partnership.
- Establish "lighthouse" partner schools associated with EPPs where true collaboration occurs and the school (rather than the college classroom) is the primary source of teacher training, professional development, research, and innovation. (Note: These schools could be newly created, existing, or reformed.)

2. Develop and support professional learning communities that are inquiry/research-based and include pre-service to novice to expert teachers, along with administrators and higher education faculty, to inform excellence in teaching, learning, and leadership.

- Leverage the NYS Master Teacher Program to create a professional learning community that establishes a structure to engage in ongoing, collaborative discussions and associated research of evidence-based successful teaching practices, supports novice and experienced teachers in the classroom, and attracts talented students into STEM teaching careers.
- Foster and incentivize educator creation/distribution of knowledge (e.g., through field and teacher action research), providing opportunities and support for P–12 teacher research, including joint projects among faculty, teachers, administrators, and students.
- Support and maintain the SUNY Educator Preparation Repository and On-line Resource Center; in partnership with the profession, identify policies and procedures for taking innovative evidence-based practices to scale.
- Mobilize the recently formed SUNY Teaching, Learning, and Assessment Network of Excellence to support professional learning communities across P–20, harnessing SUNY's vast educational research strengths, thereby connecting teachers and leaders to established researchers (from a wide range of applicable fields) and vice versa.
- Develop a framework of assessment to support continuous improvement of professional learning communities and to demonstrate their impact.

Chapter 4 – Demonstrating Excellence

Recommendations for Evaluation and Assessment (pg 72)

The TeachNY Advisory Council recommends that SUNY:

1. Work with partners—federal and state government, the profession (and its affiliated bodies), and higher education broadly—to support education's transition to a mature practice profession. The consequences of status as a mature profession would include a comprehensive framework of accountability with one set of standards for entry, preparation, and practice. In other words, the education profession would embrace

- a single set of broad outcome standards for teacher and educational leader programs;
- a single national licensure examination that tests the basic knowledge needed for initial entry into practice as a teacher or educational leader; and
- a standard set of national examinations that recognize specialization as well as advanced-level practice through board certification.

2. Work with the New York State Education Department to establish a cradle-to-career data set that ensures shared definitions of data, shared reporting expectations, and a shared understanding of the uses of the data to support the goals outlined in this report. In building the data set, the system should engage with a broad range of stakeholders to collect, manage, and report data across the P–12, higher education, and workforce areas.

3. Maintain and affirm its commitment to continued rigorous assessment for programs, using CAEP standards, regional accreditation standards, and relevant SUNY and NYSED policies.

4. Foster a culture of continuous improvement at faculty, program, campus, and system levels that encourages regular assessment of and reflection on data, identifying what works and what does not, and addressing issues that are identified. The assessments will include comparative data, supplied by the SUNY system, of other SUNY programs, as well as those in the state, region, and nation. Participants in such assessments must extend beyond the educator-preparation faculty to include representative faculty from the arts and sciences, social sciences, and other relevant disciplines most closely contributing to EPPs.

5. Engage a broad range of partners (e.g., New York State Education Department and school districts) to develop effective and reliable feedback and accountability loops in three specific areas:

- EPPs will use assessments of the knowledge and performance of their graduates to inform program development;
- Programs will follow their graduates at specified intervals to gauge the effectiveness of initial preparation and ongoing professional development offerings; and
- Programs will use a commonly developed (with additional questions provided by individual programs) questionnaire that will be sent to program graduates during their fourth year following graduation.

6. Develop experimentation zones that foster innovation and rapid prototyping that might otherwise be constrained by regulation and/or accountability measures. As described previously, it is important to have both quality assurance and a degree of flexibility in accountability frameworks, coupled with measures of effectiveness, to encourage experimentation and innovation.

7. Establish the SUNY-driven TeachNY Center for Educational Innovation, leveraging the considerable research talent and scholarly productivity of SUNY faculty and advanced graduate students across the system, as well as teacher and school leader colleagues in partnership schools, to examine what has and has not worked well in demonstration sites and innovation zones. SUNY's newest Network of Excellence in the Science of Teaching, Learning, and Assessment would be integral to such an initiative.

Chapter 5 – Building and Sustaining Excellence

Recommendations for Resource Infrastructure (pg 79)

1. Work with New York State to bring together—in very intentional ways (focused on our shared challenges)—New York's 700+ locally governed school districts with higher education under one P–20 "banner" to establish an environment of greater cooperation and coordinated direction, both statewide and regionally.

- Implement braided or fused funding to further strengthen the resource base to support excellence in educator preparation and ongoing professional development of teachers and leaders.
- Target funding specifically to support rapid prototyping of innovative educator preparation and professional development (including clinically rich simulations and residencies).
- Identify and allocate funding (in the form of grants, loans, and scholarships) to attract a strong pool of highly capable students from diverse backgrounds into education, possibly through a public service campaign that encourages young people to pursue teaching and school leadership.
- Effectively deploy successful "graduates" of the NYS Master Teacher Program, by establishing a Master Teacher Academy—the first of its kind in the nation—a corps of dedicated teachers and leaders willing to serve as expert advisors and mentors, supporting pre-service and developing teachers and leaders and simultaneous renewal.

2. As part of its all-university commitment, leverage its 64-campus, geographically distributed physical presence to extend the reach and impact of SUNY's educator preparation and professional development.

3. Create an umbrella or coordinating structure—the TeachNY Center for Educational Innovation—to more effectively leverage resources and partnerships, including SUNY's four regional Centers of Innovation at Buffalo State, New Paltz, Cortland, and Albany; to promote excellence and innovation across all SUNY EPPs; to attract external support and funding; and to raise the visibility of SUNY's programs, research, faculty, graduates, students, and partners.

Recommendations for Data and Accountability (pg 80)

1. As called for in Chapter 4, work with New York State to build a fully integrated P–20 data system, modeled after successful data initiatives seen in other RTTT-recipient states.

Recommendations for Engaging Stakeholders and Building Partnerships (pg 82)

1. SUNY should build upon already established S-TEN higher education/P–12 partnerships to dramatically expand and deepen its engagement with P–12, with shared responsibilities specified in memoranda of understanding, thereby increasing its impact on hundreds of thousands of current and future P–12 students, as well as their teachers and school leaders.

2. Similar to U.S. teaching hospitals' obligation to support graduate medical education in the form of residency programs and research, and to train professionals across the allied health spectrum, in partnership with SUNY and other higher education institutions, New York State should establish differentiated funding to support designated districts and schools for the purpose of educator and leader residency programs.

Recommendations for Optimizing Communication (pg 83)

1. Under the umbrella of the TeachNY Center for Educational Innovation, regularly communicate about new advances in education and the many spectacular achievements on the part of New York's teachers and leaders, and SUNY faculty, staff, and students—using the full range of media: from radio to Twitter, to blogs and weekly newsletters (along the lines of *Chalkbeat*).

2. Leverage the Rockefeller Institute of Government's national standing and expertise in hosting public forums on the most pressing issues of the day to develop a TeachNY Center series of talks, debates, and panel presentations, bringing together state and national experts and policy makers.

3. Partner with NYSED and sister higher education institutions to educate residents of New York about the state's incredible assets in terms of educator preparation.

4. As part of the communication strategy, continue to build upon the S-TEN Educator Preparation Repository—to disseminate best practices, new discoveries, technologies, and techniques, as well as tested products, and to invite open comment and critique from the larger education community to foster a highly valued, peer-reviewed, networked improvement community resource.

Recommendations for Research and Innovation (pg 85)

1. In the context of SUNY Excels, embrace a limited set of SUNY goals for excellence related to P–20 education, and work hand-in-hand with one another (and our partners) to promote network improvement in educator preparation.

2. Fully operationalize the SUNY Teaching, Learning, and Assessment Network of Excellence, focused on the "science of education," and designed to conduct deep, probing research into academic pedagogy and promote experimentation with new models of educational delivery. As part of this operationalization, SUNY should also strategically engage researchers from outside the discipline of education to become active in the Network.

3. As part of the TeachNY Center for Educational Innovation, build a state-of-the-art teaching demonstration laboratory where researchers come together, work side by side, and develop and test new ideas, technologies, and transformative approaches.

4. Beyond traditional federal and state sources, collaborate with business and industry, as well as foundations, to expand sponsorship of teaching, learning, and assessment research. Explicitly invite deep participation from a broad range of P–12 partners, including teachers, leaders, students, SUNY alumni, and NYS Master Teachers and program alumni.

5. Leverage the SUNY Rockefeller Institute of Government's strength and reputation in policy research to give more focused attention to the policy implications of teaching, learning, and assessment research findings.

Recommendations for Renewing Policy and Regulations (pg 86)

1. Continue to convene the TeachNY Advisory Council or another such body to engage internal and external stakeholders along with outside experts from across the country in support of SUNY's educator-preparation transformation efforts. As appropriate, invite Advisory Council members to provide additional support in targeted areas identified as most critical to continuous improvement and excellence.

2. Once the TeachNY policy framework is established, commit to regular examination and renewal, including an annual TeachNY report that highlights progress made as well as ongoing challenges and opportunities for further improvement.

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Appendix C: Teacher Preparation & Development Infrastructure in New York State

SUNY Campuses Including Education Preparation

The campuses participating in the SUNY Teacher and Leader Education Network (S-TEN) are members of regional network teams (R-TENs), which work collaboratively to achieve common goals based upon localized needs and partnerships. There are a total of 17 S-TEN programs with Plattsburgh having two separately run programs at their main campus and Queensbury location.

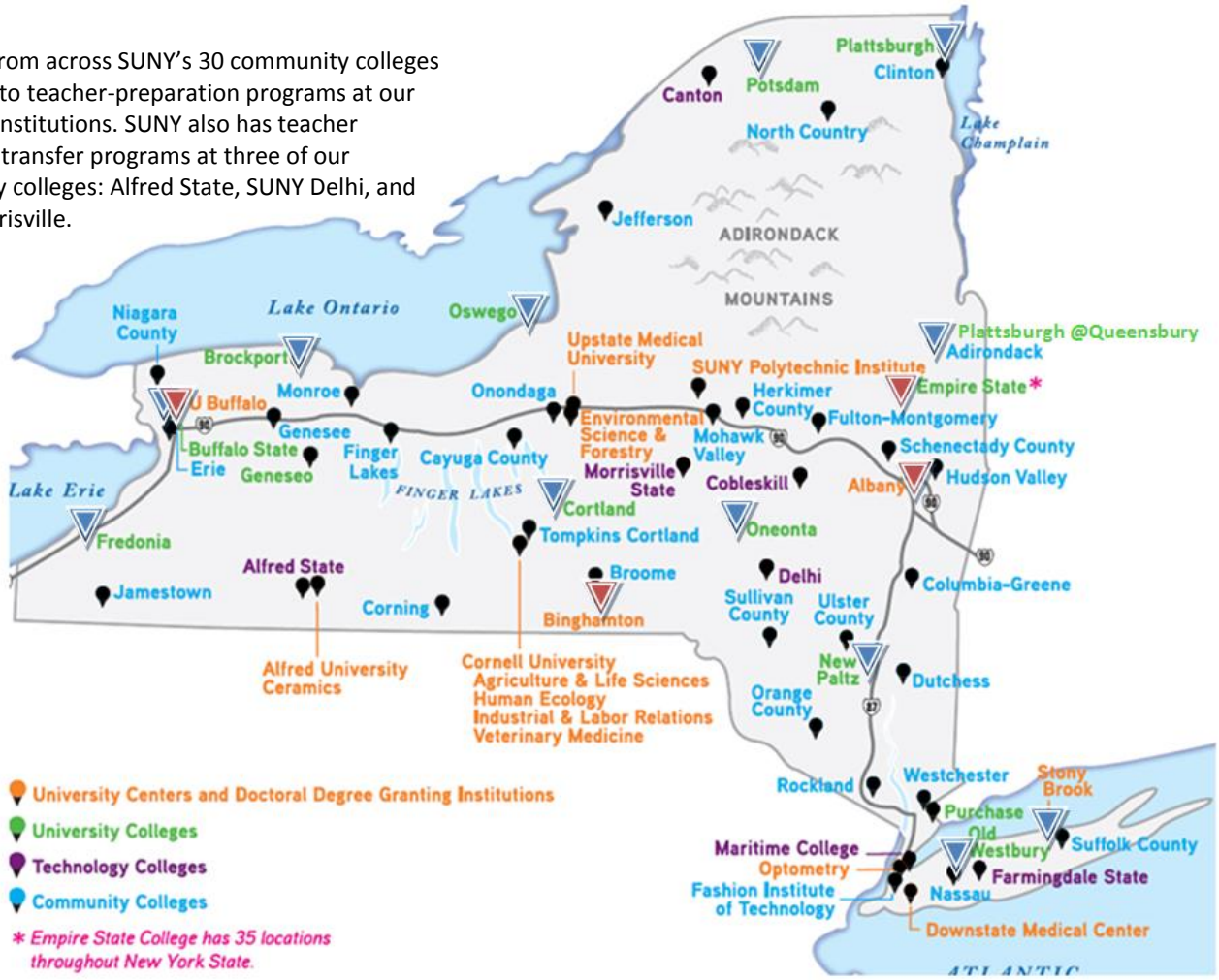
Undergraduate and Graduate Programs

1. Stony Brook University
2. SUNY Brockport
3. SUNY Buffalo
4. SUNY Cortland
5. SUNY Fredonia
6. SUNY Geneseo
7. SUNY New Paltz
8. SUNY Old Westbury
9. SUNY Oneonta
10. SUNY Oswego
11. SUNY Plattsburgh
12. SUNY Potsdam

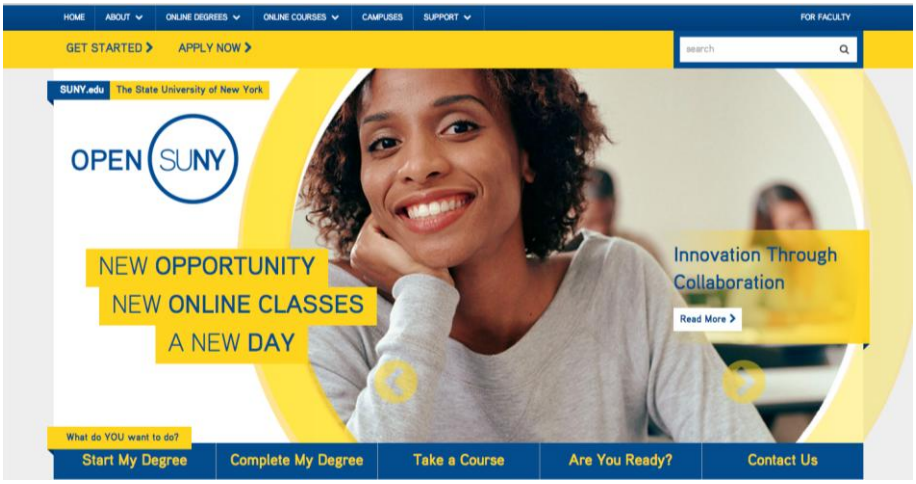
Graduate

13. University at Albany
14. Binghamton University
15. University at Buffalo
16. Empire State College

Students from across SUNY's 30 community colleges transfer into teacher-preparation programs at our four-year institutions. SUNY also has teacher education transfer programs at three of our technology colleges: Alfred State, SUNY Delhi, and SUNY Morrisville.



The Open SUNY Center for Online Teaching Excellence



Research & Innovation:

Research and innovation unit within the center that supports research and experimentation in teaching through:

- Setting research agenda
- Awarding funding
- Documenting and publicizing findings
- Facilitating connections and collaboration

Competency Development:

Comprehensive training taught by faculty experienced in online education and delivered through workshops, webinars, and certified courses, covering:

- Pedagogical approaches
- LMS platforms
- Education technologies

Course Support:

Support to enhance campus course development and refresh, provided by a team of:

- Expert peers acting as instructional design coaches
- Content-discovery specialists to help discover content
- The Open SUNY COTE Quality Review Rubric to ensure best practice in course development

Community of Practice:

A community of over 1,000 peers with strong interconnections enabled by:

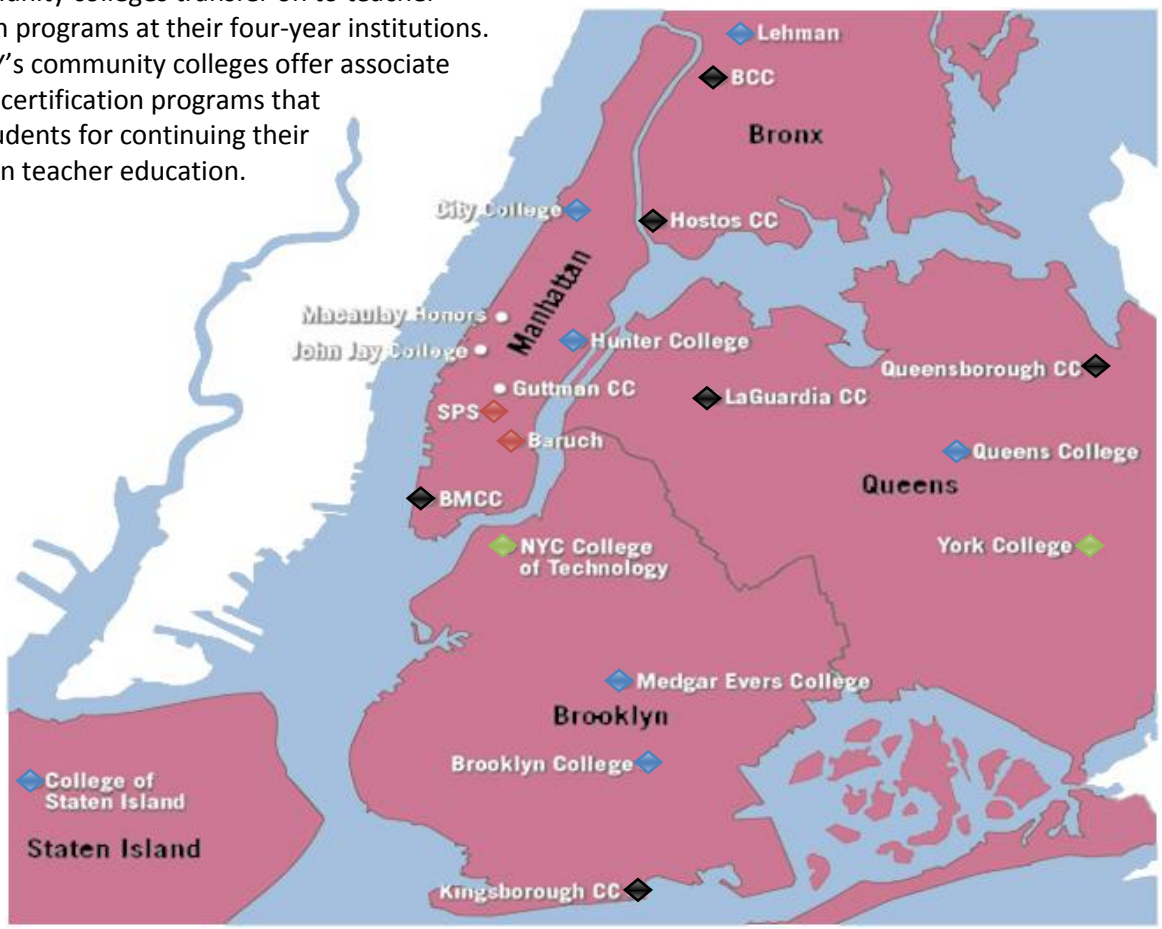
- Regular calls, webinars, and workshops hosted by the Center
- Regular newsletters
- Online forums powered by Learning Commons
- Annual conferences

CUNY Campuses Including Teacher Preparation

The City University of New York (CUNY) enrolls over 13,000 students in its education programs, two-thirds of whom are enrolled at the graduate level. All of the University system's teacher-education programs are supported by a Central Office of Academic Affairs, which provides support through grant-funded programs, research initiatives, and policy issues.

- Undergraduate Programs
  - New York City College of Technology
  - York College
- Undergraduate and Graduate Program
  - Brooklyn College
  - The City College of New York
  - College of Staten Island
  - Hunter College
  - Lehman College
  - Medgar Evers College
  - Queens College
- Graduate Programs
  - Baruch College
  - CUNY School of Professional Studies
- Certificate and Associate Degree Programs with pipelines to Teacher Preparation at four-year institutions
  - Borough of Manhattan Community College
  - Bronx Community College
  - Hostos Community College
  - Kingsborough Community College
  - LaGuardia Community College
  - Queensborough Community College

Similar to SUNY, many of CUNY's students enrolled at their community colleges transfer on to teacher-preparation programs at their four-year institutions. Six of CUNY's community colleges offer associate degrees or certification programs that prepare students for continuing their education in teacher education.



Private Institutions in New York State with Teacher Preparation

Undergraduate

1. Barnard College
2. Hartwick College
3. Houghton College
4. Marymount Manhattan College
5. Saint Francis College
6. Siena College
7. Skidmore College
8. Vassar College
9. Wells College

Undergraduate & Graduate

10. Adelphi University
11. Alfred University
12. Boricua College
13. Canisius College of Buffalo
14. Cazenovia College
15. Colgate University
16. College of Mount Saint Vincent
17. College of New Rochelle
18. The College of Saint Rose
19. Concordia College
20. D'Youville College
21. Daemen College
22. Dominican College of Blauvelt
23. Dowling College
24. Elmira College
25. Fordham University
26. Hobart and William Smith Colleges
27. Hofstra University
28. Iona College
29. Ithaca College
30. Keuka College
31. Le Moyne College
32. Long Island University
33. Manhattan College
34. Manhattanville College
35. Marist College
36. Medaille College
37. Mercy College
38. Molloy College
39. Mount Saint Mary College
40. Nazareth College of Rochester
41. New York Institute of Technology
42. New York University
43. Niagara University
44. Nyack College
45. Pace University
46. Pratt Institute
47. Roberts Wesleyan College
48. Saint Bonaventure University
49. Saint John Fisher College
50. Saint John's University
51. Saint Joseph's College
52. Saint Lawrence University
53. Saint Thomas Aquinas College
54. Syracuse University
55. Teachers College Columbia University
56. The New School
57. Touro College
58. University of Rochester
59. University of Rochester
60. Wagner College
61. Yeshiva University

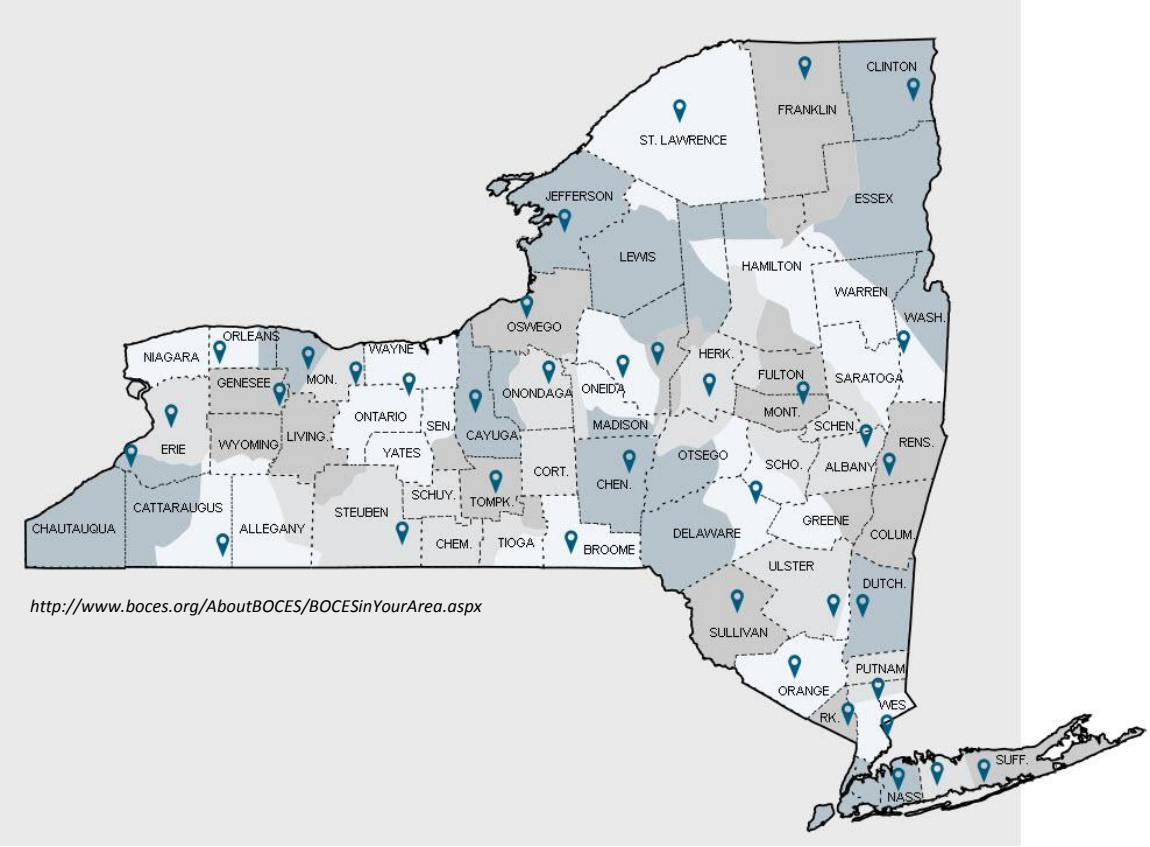
Graduate

62. American Museum of Natural History
63. Bank Street College of Education
64. Bard College
65. Metropolitan College of New York
66. Relay Graduate School of Education
67. Rochester Institute of Technology
68. Sarah Lawrence College
69. The Sage Colleges
70. Union Graduate College

Boards of Cooperative Educational Services (BOCES)

BOCES was founded in 1948 by the New York State Legislature to offer shared services and educational programs to school districts throughout New York State. The broad range of services provided by each of the 37 BOCES work to meet the needs of the districts they serve. Currently, BOCES are not available to the "Big Five" city school districts: New York City, Buffalo, Rochester, Yonkers, and Syracuse. The colored regions in the below map illustrate the areas served by the indicated BOCES.

1. Clinton-Essex-Warren-Washington
2. Broome-Delaware-Tioga
3. Capital Region
4. Cattaraugus-Allegany-Erie-Wyoming
5. Cayuga-Onondoga
6. CiTi (Oswego)
7. Delaware-Chenango-Madison-Otsego
8. Dutchess
9. Eastern Suffolk
10. Erie 1 BOCES
11. Erie 2 Chautauqua-Cattaraugus
12. Franklin-Essex-Hamilton
13. Genesee Valley
14. Greater Southern Tier
15. Hamilton-Fulton-Montgomery
16. Herkimer-Fulton-Hamilton-Otsego
17. Jefferson-Lewis-Hamilton-Herkimer-Oneida
18. Madison-Oneida
19. Monroe 1
20. Monroe 2-Orleans
21. Nassau
22. Oneida-Herkimer-Madison
23. Onondaga-Cortland-Madison
24. Ontario-Seneca-Yates-Cayuga-Wayne
25. Orange-Ulster
26. Orleans-Niagara
27. Otsego-Delaware-Schoharie-Greene
28. Putnam-Northern Westchester
29. Questar III
30. Rockland
31. Saint Lawrence-Lewis
32. Southern Westchester
33. Sullivan
34. Tompkins-Seneca-Tioga
35. Ulster
36. Washington-Saratoga-Warren-Hamilton-Essex
37. Western Suffolk

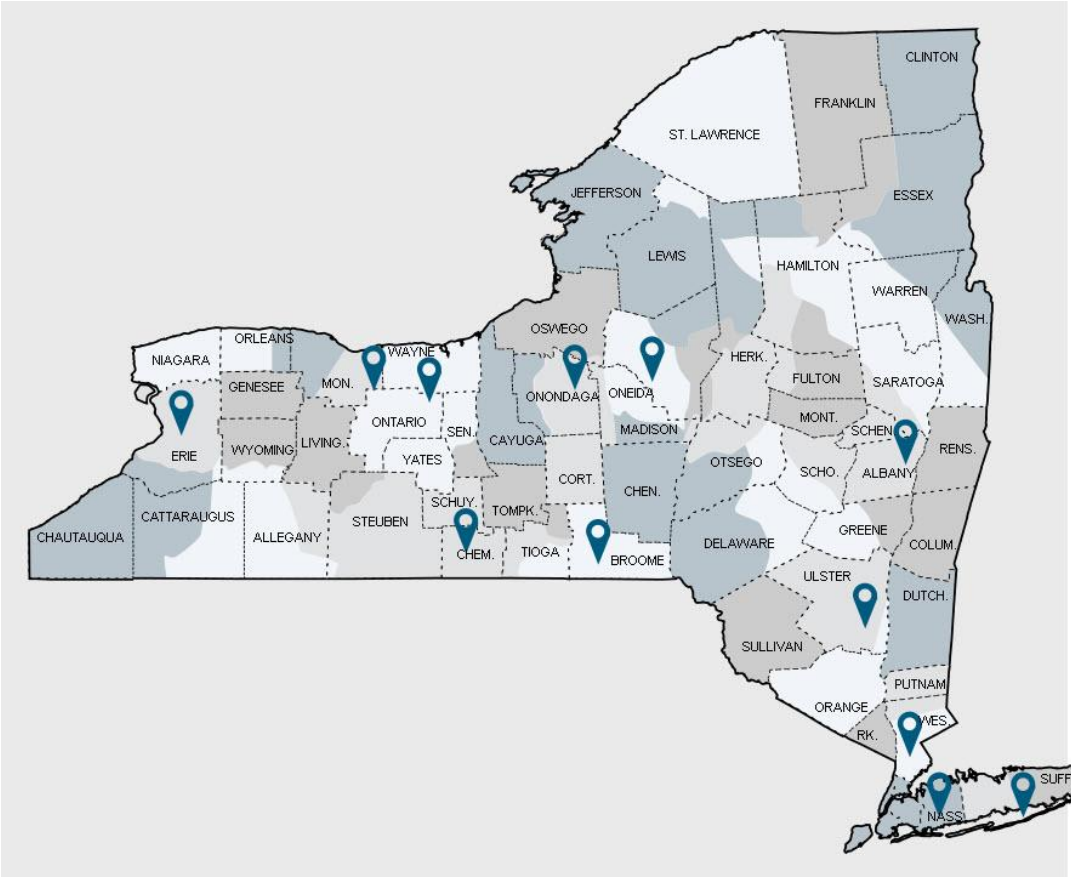


http://www.boces.org/AboutBOCES/BOCESinYourArea.aspx

Regional Information Centers (RICs)

Organized under BOCES, RICs provide availability of modern classroom tools to enhance student achievement. There are 12 RICs in New York State at this time, generally serving several BOCES locations within their region. The colored regions in the below map illustrate the BOCES areas surrounding the indicated RIC.

1. Central New York (CNY)
2. Eastern Suffolk (SUFF)
3. EduTech
4. Greater Southern Tier (GST)
5. Lower Hudson (LH)
6. Mid Hudson (MH)
7. Mohawk (Mo)
8. Monroe
9. Nassau
10. Northeastern (NE)
11. South Central (SC)
12. Western New York (WNY)



New York State Teacher Centers

There are 125 Teacher Centers located throughout New York State. These resource centers work with over 700 school districts and 1,000 non-public and charter schools, and are dedicated to high-quality professional learning experiences.

Teacher Centers are operated locally with regional and statewide network support and governed by policy boards. These boards are mostly composed of teachers and have representation from administrators, school board members, parents, higher education, and business professionals. The Centers are individually driven by local educator needs, including implementation support for NYS and federal education initiatives such as APPR, CCSS, and data-driven instruction.



http://www.nysteachercenters.org/

New York State Teacher Centers

Eastern Upstate

- Adirondack
- Cayuga-Onondaga
- Center State
- Central New York
- Greater Capital Region
- Holland-Patent
- Jamesville DeWitt/Syracuse
- Jefferson Lewis
- Mid-State
- Mohawk Regional
- New Hartford
- North Country Teacher Resource Center
- Oswego County Teacher
- Owen D Young Central School
- Potsdam

Far West

- Alden
- Buffalo
- Cattaraugus-Allegany County
- Cheektowaga
- Erie-Catt
- Kenmore Staff
- Lackawanna
- Niagara Falls
- Orleans-Niagara
- Pioneer
- Sweet Home Betty Summers
- Tonawanda/Grand Island
- West Seneca
- Western New York
- Williamsville

Greater Rochester

- Brighton
- Genesee Region
- Greece
- Whitman Resource Center
- Monroe #1 BOCES
- Pittsford
- Rochester
- Rush-Henrietta
- Tri-County
- Victor
- Waterloo
- Wayne
- Webster
- West Irondequoit
- Wheatland-Chili

Long Island

- Baldwin
- Brentwood
- Commack
- Connetquot
- East Meadow
- East Willston
- Freeport
- Great Neck
- Hempstead
- Herricks
- Huntington
- Inter-County
- Staff Development Center of the Islips
- Levittown
- Long Beach

Lower Hudson

- Bedford Staff Development Center
- BEPT Consortium
- Bronxville School
- East Ramapo
- Hudson River
- Middletown
- Mid-Hudson
- New Rochelle
- Newburgh
- Northern Westchester Putman
- Nyack
- Ossining
- Rockland
- Scarsdale
- Sullivan County

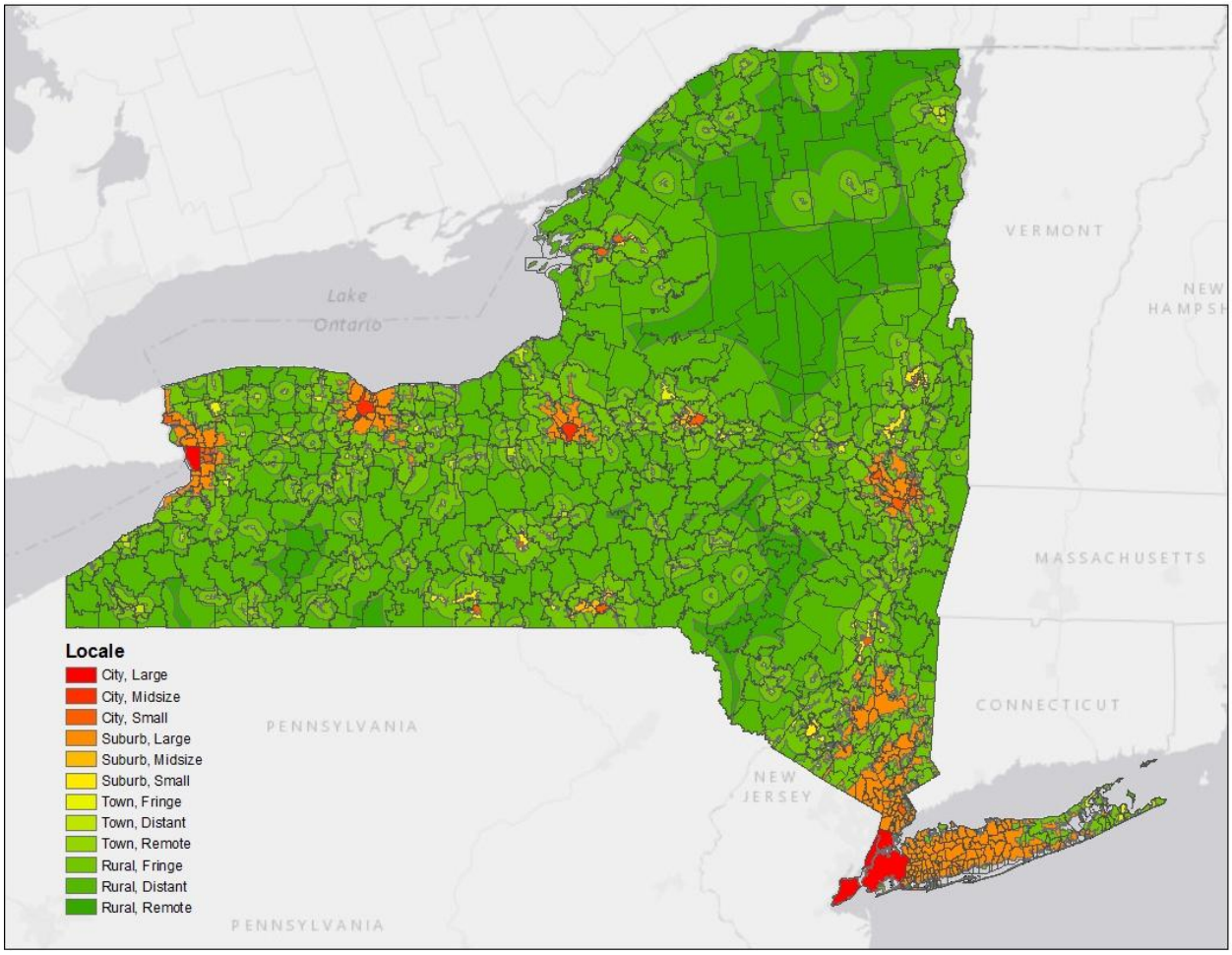
New York City

- UFT

Southern Tier

- Broome County
- Catskill Regional
- Cincinnatus
- Cortland County
- Dryden
- Endicott
- Johnson City
- Lansing – Groton
- Owego Appalachin
- Schuyler Chemung Tioga/Corning
- Southern Tier
- Tioga County

Urban/Rural Location of NYS School Districts



Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. School District Demographics System

Appendix D: Acronym List

AACTE	American Association of Colleges for Teacher Education
ACT	American College Testing
AFT	American Federation of Teachers
AIRPO	Association for Institutional Research and Planning Officers
ALST	Academic Literacy Skills Test
ANNY	Assessment Network of New York
APPR	Annual Professional Performance Review
ATS-W	Assessment of Teaching Skills-Written
BOCES	Board of Cooperative Educational Services
C2C	Cradle to Career
CAEP	Council for Accreditation of Educator Preparation
CCLS	Common Core Learning Standards
CCSSO	Council of Chief State School Officers
CEC	Council for Exceptional Children
CEURE	Center for Excellence in Urban and Rural Education
COTE	Center for Online Teaching Excellence
CST	Content Specialty Test
CUNY	City University of New York
DoDEA	Department of Defense Education Activity
EAS	Educating All Students Test
edTPA	Educative Teacher Performance Assessment
EOP	Educational Opportunity Program
EPP	Educator-Preparation Program
ESEA	Elementary and Secondary Education Act
FOIL	Freedom of Information Law
IHE	Institution of Higher Education
IITG	Innovative Instruction Technology Grants, SUNY
InTASC	Interstate Teacher Assessment and Support Consortium
ISLLC	Interstate School Leaders Licensure Consortium
KEI	Key Effectiveness Indicator
LAST	Liberal Arts and Science Test
LTF	Leadership Task Force, TeachNY
MEP	Missouri Educator Profile
MOU	Memorandum of Understanding
MSCHE	Middle States Commission on Higher Education
NAEP	National Assessment of Educational Progress
NAPDS	National Association for Professional Development Schools
NASDTEC	National Association of State Directors of Teacher Education and Certification
NBPTS	National Board for Professional Teaching Standards
NCATE	National Council for Accreditation of Teacher Education
NCLB	No Child Left Behind
NCTE	National Council of Teachers of English
NCTQ	National Council on Teacher Quality
NEA	National Education Association
NGA	National Governors Association
NICs	Networked Improvement Communities
NPBEA	National Policy Board for Educational Administration
NSBA	National School Boards Association
NYCTF	New York City Teaching Fellows
NYCTF-MI	New York City Teaching Fellows-Math Immersion
NYS/NY	New York State

NYSED	New York State Education Department
NYSUT	New York State United Teachers
OECD	Organisation for Economic Co-operation and Development
P–20	Pre-School through Doctorate
PD	Professional Development
PDK	Phi Delta Kappa International
PDS	Professional Development Schools
PI/Co-PI	Principal Investigator
PSPB	Professional Standards and Practices Board
RIC	Regional Information Centers, BOCES
RIG	Rockefeller Institute of Government
RTTT	Race to the Top
SCOA	SUNY Council on Assessment
SHEEO	State Higher Education Executive Officers Association
SPA	Specialized Professional Association
STEM	Science, Technology, Engineering, and Mathematics
S-TEN	SUNY Teacher and Leader Education Network
SUTEC	SUNY Urban Teacher Education Center
TALIS	Teaching and Learning International Survey
TEAC	Teacher Education Accreditation Council
TETT	Teacher Education Transfer Template, SUNY
TFA	Teach For America
TLA	Teaching, Learning, and Assessment
TLI	Teacher Leadership Initiative
TPA	Teacher Preparation Analytics
TSTT	Today's Students, Tomorrow's Teachers
URTC	Urban-Rural Teacher Corps
USDOE	U.S. Department of Education
UUP	United University Professions

Additional Resources

Additional information including full bibliography available at suny.edu/TeachNY or by emailing TeachNY@suny.edu.

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The State University of New York would like to thank the TeachNY Advisory Council members and all the other participants who contributed to this report.



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