Independent Teacher Education Programs: Apocryphal Claims, Illusory Evidence

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Independent Teacher Education Programs

Apocryphal Claims, Illusory Evidence

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Executive Summary

Teacher education provided in U.S. colleges and universities has been routinely criticized since its inception in the early nineteenth century, sometimes deservedly. These programs are uneven in quality and can be improved. What makes today’s situation different is an aggressive effort by advocacy groups and self-proclaimed social entrepreneurs to deregulate the preparation of teachers and to expand independent, alternative routes into teaching. This effort has gained considerable momentum and legitimacy, with venture capitalists, philanthropy, and the U.S. Department of Education all providing sponsorship and substantial funding. The strength of this effort is such that the U.S. may quickly proceed to dismantle its university system of teacher education and replace much of it with independent, private programs. The resulting system of teacher preparation may differ dramatically in its governance, structure, content and processes, moving away from its current location alongside legal, medical, and other professional preparation that pairs academic degrees with professional training.

Given the enormity of this prospective shift, policymakers should consider carefully the extant evidence about the nature and impact of different pathways into teaching, including the entrepreneurial, stand-alone programs that advocates proclaim to be the future of teacher preparation. This consideration is particularly critical because, to date, these new alternatives focus almost exclusively on preparing teachers to teach “other people’s children” in schools within high-poverty communities—not on public school teachers in advantaged communities. Therefore, their entry into the field raises important questions not only about effectiveness, but also about equity.

After surveying historical and contemporary trends in teacher preparation, this policy brief reviews what is known about the quality of five of the most prominent independent teacher education programs in the U.S., including their impact on teacher quality and student learning. Independent teacher education programs should be understood to be a subset of alternative routes to teaching, and the five examined in this brief were included because they: (a) are not university-based, and (b) themselves provide most or all of the candidates’ preparation. These five independent programs are: The Relay Graduate School of Education (Relay), Match Teacher Residency (MTR), High Tech High’s Internship (HTH), iTeach, and TEACH-NOW. Excluded from this review are other alternative programs such as Teach for America (TFA) and TNTP (The New Teachers Project), because they differ significantly in that they have substantive partnerships either with universities or with other independent entities (such as the five listed above) that provide much of the candidates’ preparation.

Two bodies of work are included in the analyses of what is known: 1) findings from syntheses of peer-reviewed research on alternative pathways into teaching, and 2) research and other sources of information about the five specific programs reviewed, including claims that enthusiasts make about program quality and internal evaluations of program impact. While many advocates assert that independent programs are bold, innovative, and successful in
accomplishing their goals, the analysis here demonstrates that such claims are not substantiated by independent, vetted research and program evaluations. This analysis indicates that the promotion and expansion of independent teacher preparation programs rests not on evidence, but largely on ideology. The lack of credible evidence supporting claims of success is particularly problematic given the current emphasis on evidence-based policy and practice in federal policy and professional standards.

The analysis also concludes that two of the programs, MTR and Relay, contribute to the inequitable distribution of professionally prepared teachers and to the stratification of schools according to the social class and racial composition of the student body. These two programs prepare teachers to use highly controlling pedagogical and classroom management techniques that are primarily used in schools serving students of color whose communities are severely impacted by poverty. Meanwhile, students in more economically advanced areas have greater access to professionally trained teachers, less punitive and controlling management practices and broader and richer curricula and teaching practices. The teaching and management practices learned by the teachers in these two independent programs are based on a restricted definition of teaching and learning and would not be acceptable in more economically advantaged communities.

Findings from the analysis of research on alternative pathways into teaching and from the analysis of available evidence on the nature and impact of independent teacher education programs have several implications for teacher-education policymaking. The following four specific recommendations are based on those findings:

- State and federal policymakers should not implement policies and provide funding streams that promote the development and expansion of independent teacher education programs unless and until substantive credible evidence accrues to support them. There currently is minimal evidence.
- State policymakers should be very cautious in authorizing “teacher preparation academies” under a provision in the new federal education law (Every Student Succeeds Act, or ESSA). Such authorization would exempt those programs from the higher standards for teacher preparation that states typically seek to enforce for other teacher education programs. Policies should hold all teacher preparation programs to clear, consistent, and high standards.
- Teacher education program quality should be determined by an analysis of the costs and benefits of multiple outcomes associated with the programs. Policymakers should thus reject the argument made by two of these five programs (MTR and Relay) that the sole or overriding indicator of teacher and program quality should be students’ standardized test scores.
- State and federal policies that are designed to support the development of independent teacher education programs should include monitoring provisions to ensure that they do not contribute to a stratified system, where teachers serving more economically advantaged communities complete programs in colleges and universities to become professional educators, while teachers serving low-income communities receive only more technical, narrow training on how to implement a defined set of curricular, instructional and managerial guidelines.
I. Introduction

Over the last 25 years, a variety of people and organizations have been increasingly critical of teacher education programs in colleges and universities, which some in the media have branded “an industry of mediocrity.” Such criticisms typically focus on issues regarding programs’ intellectual rigor, practical relevance, and ability to meet schools’ staffing needs. This is not a new development, however. Teacher education programs in colleges and universities have been criticized from their inception. What is new about the current critiques is that these criticisms have—with the help of philanthropists, think tanks and advocacy groups, the U.S. Department of Education, and policymakers—been coupled with aggressive promotion of new programs outside of higher education intended to “disrupt” the teacher education field and stimulate innovation.

These new programs, developed by so-called social entrepreneurs—people who apply business approaches to social services and needs—have been referred to as 2.0 programs. Advocates of these programs have declared college and university programs obsolete and warned that if they are not realigned with the newer programs, they will disappear.

The next decade will see the proliferation of teacher prep 2.0 models as the benefits of their collective approach to teacher education become better known and more widely recognized... Those programs that fail to join this learning community will soon reveal their obsolescence and find themselves struggling to justify their existence. Demand will shift to more relevant, affordable and flexible programs where teachers are held to high professional standards of knowledge and skill under advisement of strong instructors and coaches who are committed to improving a teacher’s effectiveness.

To determine whether such claims and predictions are grounded in credible evidence, this brief analyzes what is known about the quality of independent teacher education programs in the U.S., including their impact on teacher quality and student learning.

Independent teacher education programs should be understood to be a subset of alternative routes to teaching, and they are included in this brief if they (a) are not university-based, and (b) themselves provide most or all of the candidates’ preparation. Included in the analysis are five independent teacher education programs initiated within the last 15 years: The Relay Graduate School of Education (Relay), Match Teacher Residency (MTR), High Tech High Internship (HTH), iTeach, and TEACH-NOW. While these five programs differ from each other in some ways, they also share some similarities, as detailed below. Excluded from the review are alternative programs not based at universities that outsource much of their teacher preparation to universities or other independent providers. These excluded programs include, for example, TFA (Teach for America), TNTP (The New Teacher Project), Urban Teachers, Aspire Teacher Residency, and the Chicago Teacher Residency.

Given recent state and federal policies and incentives that have supported the rapid growth of independent programs, and given the declining enrollments in many college and university programs, it is important to examine the quality of the evidence available to support...
this significant shift in U.S. teacher preparation. Close examination is also important be-
cause the countries that lead in international comparisons of educational equity and quality
rely on consistent and substantial government investment in strong university systems of
teacher preparation—in contrast to current U.S. trends. There are no examples of high-per-
forming education systems that have relied heavily on the kind of deregulation and market
competition, grounded in test-based accountability, that many supporters of independent
teacher education programs promote.

The need to critically consider current trends is also important because teacher quality is in-
terwoven with equity issues. The teachers prepared by these programs overwhelmingly teach
in schools located in lower-income communities of color. At a time when inequities among
U.S. schools have been documented over and over again, and when schools are steadily
becoming increasingly segregated, it is especially important to understand the impact of
new programs intended to supply teachers most likely to teach “other people’s children” in
schools within communities suffering high levels of poverty. It is, after all, the perceived
lack of highly qualified teachers in such schools that is often used to justify the push for new
forms of teacher education.

II. Alternative Pathways into Teaching in the U.S.: Past, Present and Future

The Past

Historically the U.S. has had many different pathways to teaching, including school district
sponsored programs, academies, seminaries, teacher institutes, normal schools, teachers
colleges, community colleges, and four-year colleges and universities. In fact, for much of
the nation’s history, most teachers entered teaching through what would be referred to to-
day as “alternative routes,” including a substantial number of teachers who were prepared
in school district programs and in programs developed to prepare African Americans, Na-
tive Americans, and Latinos to teach in segregated schools in their communities. For only
a very brief period (approximately 1960-1990) did colleges and universities hold a virtual
monopoly in teacher education.

Beginning in the mid-1980s, there has been steady growth in the number of alternatives to
the traditional undergraduate and post-graduate college and university models of teacher
education. Some of the earliest of these included programs run by states (such as the New
Jersey Provisional Teacher Program begun in 1985) and school districts (such as the LA Uni-
ified School District Teacher Trainee Program launched in 1984, and the Houston Indepen-
dent School District Teacher Trainee Program initiated in 1985). During this early period,
the state of Florida required all districts to offer competence-based alternative certification
programs, developed either by the state for a district or developed by a district and approved
by the state.

Additionally, many colleges and universities sponsored alternative programs. These typical-
ly offered either the standard institutional program at more convenient times and locations,
to attract people with commitments that precluded their participation in the traditional
program, or were alternative academic programs with reduced requirements. The majority
of the alternative routes to teaching have been sponsored by colleges and universities.
There are several reasons for the growth of alternatives to the campus-based teacher education programs that had dominated the field for three decades. Perhaps the most often cited rationale for alternative programs has been the need to address real or projected shortages in particular disciplines and in hard-to-staff schools in urban and remote rural areas, where high teacher attrition rates are common. The specialty areas often said to have shortages include special education, bilingual/English-learner education, mathematics and science. To meet perceived needs, alternative routes can potentially draw people into teaching who might not otherwise consider becoming teachers and can potentially attract people seeking career changes—retired military personnel and engineers, for example. Other efforts tried to attract more people of color into teaching, so that the nation’s teaching force would better reflect the diversity of American society and of the pupils in public schools.  

In addition, the financial costs and time commitment of university teacher education might be a barrier keeping potentially good teachers out of teaching, thus making lower cost and less lengthy alternatives desirable. Also, new pathways to teaching were seen by some policymakers as better alternatives to the large number of “emergency” credentialed teachers that existed in some areas of the country.  

Persistent criticism of schools and colleges of education also fueled the reemergence of alternative pathways. Critics charged that traditional programs did not prepare teachers willing to teach in the hard-to-staff schools that needed them, and they also charged that even those who were willing to try were not adequately prepared to be successful over time. Pointing out (correctly) that students who most needed high-quality teachers instead typically are given the nation’s least prepared and least experienced teachers, critics of schools and colleges of education attributed this problem to inadequate preparation of teachers willing and able to teach in urban and remote rural schools in high-poverty areas.  

Finally, some support for alternative certification programs came from within the college and university teacher education community, based on the supposition that new programs would stimulate innovation in the field.  

The Present

The founding of Teach for America (TFA) in 1990 marked the beginning of a shift in the nature of the alternatives provided for students and schools in high-poverty areas. Rather than academic institutions, states, and districts, private entities began assuming a significant role in developing alternative programs. Initially, because of the “highly qualified” teacher provisions in No Child Left Behind (NCLB) and in state certification policies, TFA and other programs like it (such as The New Teacher Project, or TNTP) partnered with accredited college and university programs. However, changes in federal and state regulations— incentivized in part by the U.S. Department of Education—later made it possible for independent teacher education providers to offer their own programs independent of colleges and universities.  

Generally, then, since the time of early authorization of internship and teacher trainee programs in California as well as similar programs in Texas and New Jersey during the 1980s, there has been a steady increase in alternative certification programs. And, during the last decade, there has also been a steady increase in independent programs that provide all of the preparation themselves, with no partnering college or university.
The expansion of such independent programs seems partially linked to the shortages of teachers nationwide that are a result of three factors: declining enrollments in college and university preparation programs, the lack of alignment between the teachers who are prepared to teach and the hiring needs of districts, and the salaries and working conditions for teachers. For example, in the fall of 2015, there were still approximately 300 unfilled teaching positions on the opening day of school in the Denver Public Schools, and then in May 2016, Relay announced that it would soon be setting up a new campus of its teacher certification program there. College and university teacher education program enrollments are declining in many parts of the country, and some states that are facing teaching shortages are actively seeking the entry of new program providers. This is true even in states like Washington that historically have resisted expanding teacher preparation beyond colleges and universities. For example, in June 2016, as a result of teacher shortages in Washington in certain subjects and in particular geographical areas, the Washington Professional Educator Standards Board issued a call for new providers to offer alternative programs:

Seeking New Alternative Route Program Providers

Our Alternative Route program provider interest is growing in the community college, non-profit, and university systems. We are excited to see new providers interested in becoming approved programs and offering Alternative Route programs. If you are interested in becoming an approved Alternative Route provider, please contact... We will be hosting provider information sessions for interested parties in the Summer and Fall.

The growth of independent alternative route providers has also been driven by the steady growth of national charter school networks, such as Rocketship and the Knowledge is Power Program (KIPP). These networks can and do run their own programs specifically designed to prepare teachers for their schools. For example, Relay was founded by the leaders of three charter school networks (Achievement First, KIPP, and Uncommon Schools), and both Match and High Tech High charter schools founded their own independent teacher certification programs (MTR and HTH). Philanthropic and government resources have supported such growth by promoting the deregulation of teacher education, which has allowed independent teacher education programs and networks to compete with college and university teacher education programs.

A concurrent decline in philanthropic support for college and university-based teacher education has been coupled with substantial reductions in state funding for the public universities that prepare most of the nation’s teachers, sparking tuition increases and exacerbating the disincentive of cost. The attractiveness of a shorter and cheaper alternative route increases if the price tag goes up for the higher-education option. Such declining support for the public universities where most U.S. teachers are still prepared is, not surprisingly, creating a two-tiered system of teacher preparation. Increasingly, non-university programs are preparing teachers who will serve students in high-poverty communities (“other people’s children”), while colleges and universities continue to prepare teachers who will predominantly serve students in more economically advantaged middle class communities. Unless the alternative routes taken by teachers heading to less advantaged communities are of high quality, this extension of the bifurcation of the public school system in the U.S. is likely to widen the opportunity gaps for learning that currently exist.

The twin trends noted earlier—deregulation and the fostering of competitive environments—are associated with the ascendancy of a market ideology of education reform. Placing their confidence in private sector solutions to social problems, advocates of greater deregulation...
and market competition consistently work to foster greater and greater choice and competition in the education “marketplace.” Philanthropic and government entities have adopted this perspective and supported the growth of privately run charter schools to compete with public schools overseen by local school districts. Similarly, philanthropists, venture capitalists, and the U.S. federal government have all promoted policies and provided substantial funding to enable expanded development of independent teacher education programs, asserting that the new independent programs will pressure college and university programs to innovate and thus raise the overall quality of teacher preparation. For example, Rick Hess of the American Enterprise Institute has argued:

...weaker teacher preparation programs would likely fall by the wayside. The fact that Schools of Education could no longer rely on a captive body of aspiring teachers would expose them to the cleansing winds of competition. Schools would have to contribute value by providing teacher training, services, or research that created demand and attracted support—or face significant cutbacks.

Implicitly endorsing this perspective, the federal government has recently enacted legislation—the “teacher preparation academy” provision in the 2015 Every Student Succeeds Act (ESSA)—that provides a potentially significant push toward an even more competitive environment for teacher education, with fewer safeguards on teacher quality.

Going Forward

The teacher preparation academy provision is part of ESSA’s Title II. The concept was first promoted in 2011 under the title of the “Great Teachers and Principals Act” (or GREAT Act) and failed to pass Congress in two different sessions. It was originally developed by leaders of the New Schools Venture Fund, the Relay Graduate School of Education, and several members of Congress as a way to provide additional financial support for the growth of programs like Relay. Importantly, states are not required by this ESSA provision to authorize the academies; if they do, they will open the door to lower standards for teacher preparation programs in several specific ways.

For example, states that authorize academies and use their Title II funds to support them will be required to allow the teacher-education students to serve as teachers of record while enrolled in the academies—essentially allowing individuals with little or no preparation to serve as professional teaching staff. States will also be required to exempt academies from “unnecessary restrictions” on their operational methods. Specifically, states will not be able to do any of the following: require academy faculty to have advanced degrees; require academies to seek accreditation; or impose regulations on undergraduate or professional coursework. For example, states will not be able to require teacher candidates in academies to have an academic major in the subjects they teach. These sorts of requirements are generally mandated by states for traditional college and university teacher education programs.

About the Rationale for Current Trends

Two primary narratives underlie the desire by philanthropists, venture capitalists, and federal policymakers to disrupt the field of teacher education and bring in new programs developed by social entrepreneurs. First is a derisive narrative about university teacher education that insists schools of education have failed and therefore their role in preparing teachers...
should be reduced.\textsuperscript{41} Second is the contention that deregulation and market competition will raise the quality of teacher preparation.

The first contention does find some support among researchers and leaders; there are indeed problems in university teacher education programs that have been documented for many years.\textsuperscript{42} Attempts to address these problems have focused on raising the standards for entry to and exit from teacher education programs, strengthening the connections between the coursework and clinical components of programs, and a stronger focus on teaching teachers how to enact research-based teaching practices.\textsuperscript{43} Today’s charge that university programs have totally failed (and should therefore be replaced) is overstated. This overstatement is grounded in part on instances of advocates manipulating or misrepresenting research and then using the distorted pictures of research evidence to discredit university programs and to promote non-university programs.\textsuperscript{44}

For example, in a 2012 Congressional hearing on Alternative Certification, both the committee chair and members of the “expert panel” stated that a 2005 report\textsuperscript{45} sponsored by the American Educational Research Association, synthesizing research on the effects of alternative pathways into teaching, concluded that “there were no differences in teacher efficacy or teaching competence, as measured by classroom observations, between alternatively and traditionally certified teachers.”\textsuperscript{46} This and similar statements made during the hearing contradict the actual conclusions of the research review. In fact, the review itself explicitly warned against selective use of research evidence to support specific positions on pathways to teaching, and it found extant credible research insufficient to provide a definitive answer to the exceedingly complex question of comparative program quality.\textsuperscript{47} Additional discussion of this point appears below, in a review of existing peer-reviewed literature.

### III. Characteristics of the Five Independent Programs

The five post-baccalaureate independent programs reviewed in this brief vary along several dimensions (see Table 1). One dimension is how much, if any, preparation students receive before assuming responsibility for a classroom. In the iTeach Internship option, TEACH-NOW, and High Tech High Internship (HTH) program, many of the students are teachers of record while they complete most or all program requirements. This is also true for all of those enrolled in the original Relay model.\textsuperscript{48} In contrast, both MTR, and Relay’s new Teacher Residency option provide students with a year of preparation under the guidance of a mentor teacher before they become teachers of record. In the iTeach clinical option (which is a very small part of the iTeach enrollment), iTeach students are not teachers of record until they first complete coursework and a 12-week supervised clinical experience under the supervision of a mentor teacher.\textsuperscript{49}
<table>
<thead>
<tr>
<th>Name of Program and Date of Establishment</th>
<th>Who Runs the Program</th>
<th>2015-2016 Enrollment</th>
<th>Length of Program(s)</th>
<th>Type of Program: Early entry(^1) or Residency(^2)</th>
<th>Location(s)</th>
<th>Regional and National Accreditation</th>
<th>Online Learning Components</th>
</tr>
</thead>
</table>
| Relay GSE 2011                           | Relay Graduate School of Education | Certification – 120
Degree & certification - 836 | Residency program – 2 years
Master of Arts in Teaching certification program – 2 years | Residency Program
Master of Art in Teaching program – Early Entry | Baton Rouge
Chicago
Connecticut
Delaware
Denver
Houston
Memphis
Nashville
New Orleans
New York City
Newark
Philadelphia & Camden | Council for the Accreditation of Educator Preparation &
Middle States Commission on Higher Education Accreditation | Residency Program – around 40% of content is delivered online
Master of Arts in Teaching – around 40% of content is delivered online |
| Match Teacher Residency 2008*           | The Charles Sposato Graduate School of Education | First-year students – 41
Second year students – 38 | 2 years | Residency | Boston | Has applied for regional accreditation from the New England Association of Schools and Colleges | None |
| High Tech High Intern Program 2004      | High Tech High Credentialing Program | Intern Program - Year 1 - 38 students
Internship program - 2nd year - 45 students | 2 years | Early Entry | San Diego county, California | None | 1-2 preservice courses are delivered online |

*Note: This date was originally stated to be 2012, not 2008. In fact, MTR was started in 2008; the 2012 date was the beginning of Sposato.
<table>
<thead>
<tr>
<th>Program</th>
<th>Institution</th>
<th>Duration</th>
<th>Coursework Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>iTeachU.S. 2003</td>
<td>iTeachU.S.</td>
<td>2,049</td>
<td>Internship option—2 semesters of internship as the teacher of record (Students have up to 2 years to finish the program) Clinical teaching- one semester of clinical teaching under the supervision of a mentor teacher along with self-paced coursework that can be completed in 6 months-1 year</td>
</tr>
<tr>
<td>Texas-Internship and Clinical Teaching program- Residency Option</td>
<td>Council for the Accreditation of Educator Preparation</td>
<td></td>
<td>Texas-Internship and Clinical option Louisiana and Hawaii-Internship option only</td>
</tr>
<tr>
<td>TeachNow 2012</td>
<td>TeachNow / Educatore School of Education</td>
<td>800</td>
<td>Teacher Preparation Certificate Program - 9 months Master’s degree programs - 12 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Teacher Preparation Certificate Program – both options are available Master’s degree in Education with Teacher Preparation program – both options available Master’s degree in Education with Globalization and Research Emphasis – both options available</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Online International program Has applied for accreditation by the Council for the Accreditation of Educator Preparation and the Distance Education Accrediting Commission. Coursework, is completed online with virtual class sessions</td>
</tr>
</tbody>
</table>

1 Early entry means the candidate receives some summer training courses and is the teacher of record during the rest of the teacher preparation program.

2 Residency here means the candidate receives training and works under the supervision of a practicing teacher for at least a school year before becoming the teacher of record.

3 [http://www.relay.edu/](http://www.relay.edu/) Relay was piloted as Teacher U within Hunter College 2008-2011.

4 The Relay Baton Rouge campus plans to open and offer two programs in 2016,
The RelayConnecticut campus hopes to open and offer two programs in 2016 by obtaining institutional and licensure approval.

The Relay Denver campus only offers the Teaching Residency Program.

The Relay Nashville campus plans to open and offer two programs in 2016.

Experienced teachers in the program can apply to take an exam that changes the program completion time from two years into one year. There are some of these students included within the year two enrollment numbers.

The iTeach internship is a different type of early entry program because teachers are not required to complete coursework before they enter the classroom.

Programs also vary in length and accreditation status. The length of four of the programs ranges from nine months (TEACH-NOW) to two years (HTH, MTR, and Relay). In iTeach, students complete their program in six months to two years depending on the program option selected. And, while all the programs are authorized by the states in which they are located, two are also nationally and/or regionally accredited: iTeach, and Relay by the Council for the Accreditation of Educator Preparation. Relay is also regionally accredited by the Middle States Commission on Higher Education Accreditation.

iTeach offers a teacher education program and a principal certification program in Texas and Louisiana, and the other four (MTR, Relay, TEACH-NOW and HTH) have formed graduate schools of education that offer a range of programs in addition to their initial teacher certification programs, including programs for principals, already certified teachers, and in one case (MTR), for tutors.

Additionally, all three of the charter-affiliated programs have formed partnerships with other charter schools that share their philosophies. For example, Relay has formed partnerships with additional charter organizations in different cities, such as the Noble charter network in Chicago, which offers the Noble-Relay Teaching Residency. The Boston-based MTR has formed partnerships with charter schools in Dallas, Chicago, Denver, and New Orleans.

One similarity within the group of charter-affiliated programs is that all claim to minimize the division between teacher education coursework and clinical practice that is common in university teacher education programs. For example, it is asserted that in the HTH Intern program, “There is a direct connection between what students learn and do in courses and what’s happening in their classrooms.”

Another similarity within this group is that the MTR, Relay and HTH programs all use the particular philosophies and preferred teaching methods in their associated charter schools.
as a base for teacher preparation and certification. Each program is, in fact, highly prescriptive about teaching methods. For example, the MTR website states that “The program is direct and prescriptive in its teaching of specific pedagogical moves and habits.” And, not surprisingly, these programs seek and admit candidates who appear philosophically aligned with their respective missions.

Philosophically and practically, however, the charter-affiliated programs overall reflect a variety of visions and goals. Relay and MTR pursue the narrow goal of preparing teachers who can raise students’ standardized test scores; therefore, their programs offer instruction in classroom management and teaching strategies focused on raising those scores. Both require graduates to demonstrate a certain level of proficiency in raising student test scores, and both promote their alleged effectiveness to potential applicants and districts and charters schools by claiming that their graduates have proven records of classroom success based on raising test scores. Although it is also affiliated with charter schools, HTH’s much broader mission is to prepare reflective teachers who can develop democratic classrooms in socio-economically diverse schools; it promotes project-based learning as a methodological means to that end.

None of the five independent programs appears to employ more than a few traditional doctorally prepared university teacher educators as instructors. The two programs not affiliated with charters also take a different approach, basing their programs on common set of national teaching standards. The iTeach program and TEACH-NOW use the INTASC Model Core Teaching Standards, developed by the Council of Chief State School Officers (CSSO) and used as the basis for many state standards. Additionally, a central focus in TEACH-NOW’s cohort and activity-based program is on preparing teachers to use technology and digital tools in their teaching.

The five programs utilize online instruction to varying degrees. While HTH and MTR provide little or no online instruction, Relay, iTeach, and TEACH-NOW use extensive online instruction, ranging from Relays’ approximately 40% of the curriculum housed online to iTeach and TEACH-NOW’s online placement of all curriculum except for the clinical component. Some advocates promote online instruction as one way of lowering operational costs and helping to develop a “sustainable business model.”

Another common characteristic among the charter-affiliated programs is that instruction and mentoring are typically provided by teachers who have mastered the methods taught in the program (and used in the charter schools). In the two non-charter-affiliated programs (TEACH-NOW and iTeach), experienced K-12 teachers not affiliated with any particular set of teaching practices provide most of the instruction. This approach stands in contrast to conventional teacher education programs, where clinical instructors of this type are also used but only as an addition to professors and doctoral students. As is the case with other professional schools (law, business, medicine, etc.), these scholar-instructors are also generally former practitioners, but they supplement that practitioner knowledge with research knowledge.

None of the five independent programs appears to employ more than a few traditional doctorally prepared university teacher educators as instructors. In addition, all five programs—but particularly those associated with charter schools—claim to provide significantly more feedback and coaching to their teachers than university programs provide (often with video playing a role). HTH also employs student feedback: “student consultants” in the charter schools provide regular observations of and feedback on interns’ teaching.

http://nepc.colorado.edu/publication/teacher-education
Ongoing expansion is yet another common characteristic. Some programs discuss plans relevant to “going to scale” and increasing the number of teachers they prepare in different sites across the U.S., and in one case—TEACH-NOW—even around the world. In 2015, TEACH-NOW leaders stated that globally, they hoped to prepare 10,000 teachers in the next five years. Relay began as Teacher-U in 2008 in New York City and soon thereafter expanded to Newark; in 2016 it will operate in 12 sites around the country and has plans to continue growing. Both MTR and HTH began by preparing teachers for their own charter schools, but now both have developed additional partnerships to prepare teachers for other charter schools with philosophies and methods similar to their own. iTeach, which began in Texas, has expanded to Louisiana and Hawaii.

With the exception of iTeach, which receives no external funding, all of the programs have received external funding from groups such as the Gates Foundation and the New Schools Venture Fund which, along with many private funders, promote the “scaling up” of programs. Julie Mikuta, who was with the New Schools Venture Fund when it first supported MTR and Relay, has been quoted as saying that two motivations for funding such programs were to drive change in the larger field of teacher education and to lower the cost of preparing teachers—so that what individuals pay for a program is appropriate for the salaries they will receive.

IV. Peer-Reviewed Syntheses of Research on Teacher Education Pathways

Four peer-reviewed syntheses of credible research on various approaches to teacher education spanning more than a decade have reached the same conclusions: credible research has not yet demonstrated one specific approach to teacher education as superior to others. This conclusion regarding insufficient evidence is not the same as a finding that there is no difference. As noted above, despite the frequent assertion by programs themselves (and in the media and the halls of Congress) that research has shown a particular program or programs to consistently produce better teacher and/or student outcomes than others, or that research has shown various types of teacher education to make no practical difference, credible research in fact supports neither of those claims. Instead, these four peer-reviewed syntheses of the existing research on alternative pathways find that key questions about teacher preparation still lack definitive answers.

For example, in 2010 a National Research Council panel of experts reviewed the existing body of research and concluded: “There is currently little definitive evidence that particular approaches to teacher preparation yield teachers whose students are more successful than others.” In the studies that were reviewed by the panel, success in teaching was measured almost entirely by growth in pupil test scores for teachers who were prepared in different programs. Occasionally, other factors such as classroom management problems were considered. Importantly, the panel report also emphasized that this conclusion about the lack of clear findings does not mean that the characteristics of pathways do not matter. Rather it suggests research on the sources of variation in preparation such as selectivity, timing, and specific components and characteristics is needed.

The most recent peer-reviewed synthesis of this research, in the American Educational Research Association’s 2016 Handbook of Teaching, reaches similar conclusions:
Not surprisingly, studies in this line of research, which compared the impact on students’ achievement of teachers with alternative certification and/or from “alternative” pathways or compared the impact of teachers from a particular “alternative” program with those from other sources of new teachers, are inconsistent and ultimately inconclusive at a broad level in terms of what they tell us about the effects of particular programs. . . .

The findings of these two peer-reviewed research syntheses aligned with the conclusions of two earlier syntheses, one sponsored by the American Educational Research Association, and one sponsored by the U.S. Department of Education—that not enough is yet known to gauge comparable merit of programs and approaches.

The fact that all four research syntheses have reached the same conclusions indicates that claims boasting research support for any one approach or program are overstated and inaccurate—as are claims that the type of preparation a teacher candidate receives makes no difference in teacher performance. While much or most of the descriptive material available on independent program websites and in promotional articles in the media proclaim independent pathways to teacher education to be bold, innovative efforts that represent the future of teacher education, credible evidence to support such judgments simply does not appear in existing research.

IV. Other Evidence on the Impact of Independent Teacher Education Programs

There is in fact very little peer-reviewed research that has been conducted on the impact of specific independent teacher education programs. Although some efforts in this vein are in progress, only one study was identified in research for this brief. It examined the effects of communicating with families using strategies that are a part of the MTR Curriculum. This study found several positive effects of using MTR methods of teacher-family communication. Specifically, sixth and ninth grade students received a daily phone call and written text message at home during a mandatory summer school program. Such MTR techniques for frequent teacher-family communication increased student engagement as measured by homework completion rates, on-task behavior, and class participation. However, only a single element of a summer school program was examined—shedding little or no light on the impact of the full MTR approach. Beyond this one study, other evidence on the five programs’ effectiveness is found only in various claims the programs make about their effectiveness, supported primarily by testimonials from those involved and by non-rigorous claims regarding standardized test scores—the former neither an unbiased nor random sample, the latter an inadequate single measure backed by no solid studies, as discussed below. Additional sources of documentation include other internal measures unique to particular programs.

Programs often cite the graduates’ opinions as offering evidence of a program’s effectiveness, as in this example from TEACH-NOW:

The TEACH-NOW program provided me a better understanding of effective instructional strategies, collaboration skills, and classroom management. Their 21st century platform shapes the minds of educators by pairing a multilayered curriculum with innovative tools and strategies. I walked away with a new view of what differentiation looks like in a classroom and fresh knowledge on how to more effectively reach all of my students. Additionally, I was introduced to
several websites, graphic organizers and tools that I was able to use in my classroom. In short, the experience was amazing.68

Testimonials have also been reported secondhand by the journalists and advocates of the deregulation of teacher education, who promote the expansion of independent programs and who are often connected to think tanks, advocacy groups, or to the funders. The following example was published in *Education Next*, a journal that is sponsored by the Hoover Institution, Thomas Fordham Institute, and the Harvard Kennedy School Program on Education Policy and Governance.

Many also told me that Relay’s lessons have changed their classroom culture. “The culture went from being compliant to being invested,” said Max Silverstein, a Penn State business major now teaching in an early childhood classroom at Newark Legacy charter school. I heard the same thing from Alonte Johnson, a Moorehouse College English major who is teaching middle school English at King’s Collegiate Center School in Brooklyn. A few days earlier his students designed a seating chart that paired the better and slower readers. “The environment is more interdependent instead of everyone working for me,” he said.69

Another claim about the effectiveness of independent programs associated with some charter school networks is that student test scores increase in the charter schools where the program graduates teach. While the links between the allegedly successful charter schools and the preparation programs they run are not explicitly made, it is strongly implied that their teacher education programs are high quality because of the record of the charter schools in raising test scores. For example, a Pioneer Institute report on MTR asserted that:

In the 2012-13 school year Match 10th graders placed first state-wide among high schools where more than 70 percent of students are low-income: they placed 22nd among all 305 high schools in the Commonwealth... Match High School has been cited by the U.S. Department of Education (USDOE) as one of the nation’s best charter high schools, and Match Middle School, and High School have both received the prestigious EPIC award, which recognizes value-added proficiency gains by students, for each five years between 2008 and 2012.70

Given the emphasis on raising test scores in MTR’s teacher preparation program, information on student test performance can be offered by advocates as indirectly demonstrating that program’s effectiveness. But studies such as this, whatever their strengths and weaknesses, were not even designed to evaluate the effectiveness of the underlying teacher preparation programs. No credible causal inferences could possibly be made about the teacher education programs, merely from the charter school evaluations.

Two of the programs (Relay and MTR) also present data from their own internal analyses of their graduates’ teaching effectiveness. Relay sets student learning goals for teachers and then asks the teachers to set their own goals within those parameters. At the program’s end, teachers discuss results at their master’s defenses. Several examples of goals set by Relay teachers in the 2014 cohort are presented on the program website:

(1) On average, my students will achieve a year’s worth of growth as measured by the STEP Literacy Assessment; (2) On average, my fifth grade students will achieve 70% mastery of the fifth-grade state science standards; and (3) On average, my students’ average writing rubric scores will improve 1.5 levels as measured by a five-point, 6 Traits rubric.71

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Teachers must set both minimum goals in two content areas, and they are encouraged to set ambitious goals in each area. Several examples of teachers’ ambitious goals are provided on Relay’s website, such as, “At least 80% of my students will meet their student-specific goals in reading as measured by the STEP Literacy Assessment.”

Relay also presents a list of what are termed “notable achievements” of their 2014 cohort in relation to the teachers’ goals. For example: “94% of graduate students in our New York M.A.T. program met or exceeded their minimum learning goals for students and 54% of them met their ambitious goal in at least one content area related to their teaching placement.” The implication is that Relay’s teacher preparation is effective because a large percentage of teachers meet minimum achievement goals and many meet ambitious achievement goals.

There is nothing in the design of these internal evaluations though that would support causal inferences attributing the meeting of student achievement targets to the teacher education program. Even in many of the well-funded studies of the impact of alternative pathways into teaching, researchers have been unable to distinguish the effects of the programs studied from those of the individual characteristics candidates bring to the programs and of the contexts in which they teach.

The Relay website also presents summary data on their graduates’ and employers’ perspectives about the program. For example, with regard to their graduates’ perspectives, it is stated, “Across a variety of indicators, 92% of the graduates in the class of 2014 reported their agreement with the effectiveness of Relay faculty and instruction.” With regard to the perceptions of employers (who, keep in mind, are not independent of the Relay program), it is stated, “Across a variety of indicators, 92% of employing school leaders affirmed their satisfaction with the performance of their teachers who were enrolled at Relay.”

MTR also presents vague internal data about its teachers’ effectiveness, in its 2014 annual letter from Sposato GSE, the institution in which MTR is situated. The letter claims that “students taught by first-year teachers trained by Sposato grow more than 64% of students with comparable academic histories (many of who are taught by veteran teachers).” A footnote associated with this claim states that evaluation data from three sources during 2010-2014 were averaged to generate the data supporting this conclusion. These evaluations included: (1) principal evaluations that rate MTR teachers and other teachers in their schools at the end of the school year; (2) students’ anonymous evaluations of their teachers; and (3) outside expert evaluations—blind evaluations of MTR graduates and graduates from other programs in the same school after they have been teaching from four to seven months. The evaluators, described as “school leaders and master teachers,” observed and scored a lesson based on an internally developed rubric and did not know which were the MTR graduates. MTR did not specify what types of evidence principals, students and outside evaluators offered to document their opinions.

Collecting such internal data is good practice, potentially helping with program improvement. But there are real problems with policymakers using such data to make evaluative judgments. As noted, the validity of internal analyses like those just discussed are open to question and less reliable than evidence based on independent and vetted research efforts. Many questions arise because websites for both Relay and MTR provide minimal information about the specifics of the evaluations and no information about how to obtain more detailed information on the internal assessments.

Internal claims and analyses add little or no evidence of these programs’ effectiveness.

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Beyond internal assessments, Relay seems to intend to bolster its case for effectiveness with yet one other claim: it asserts that its training approach is based on practices that research has proven effective. The former research director at Relay claimed in an American Enterprise Institute publication that Relay and programs like it (referred to as 2.0 programs) “are deliberately anchored in best practices and insights drawn from classroom and school experience and educational research.”

Relay, for example, has proudly proclaimed that faculty member Doug Lemov’s classroom management strategies for “Teaching like a Champion” are the core of its curriculum. However, Lemov’s strategies are based solely on his own observations and conversations with teachers and administrators in various charter schools that he claims are high performing. By any reasonable standard, the assertion that Lemov’s strategies represent “best practices” does not possess the kind of rigorous scientific evidence-based validity that is being called for in teacher education programs.

Thus, internal claims and analyses add little or no evidence of these programs’ effectiveness. Given that neither program-specific reports nor syntheses of credible research demonstrates the effectiveness of the five programs analyzed (or of others like them), there is no case to be made in support of the current huge investment of resources into such independent programs or their expansion. Rather, as noted earlier, program branding and marketing have co-opted the term “research” and offered misleading summaries of legitimate research findings, all to make a case for “disruptive innovation” in teacher education based on ideology rather than evidence.

V. What is Meant by Effective, and What are the Costs and Benefits of Various Approaches?

Studies of the impact of two of the independent programs examined here (MTR and Relay) are currently being conducted by Mathematica and the Center for Education Policy Research at Harvard University. Even if these studies show that graduates of MTR and Relay are able to raise student tests scores to a greater extent than graduates from comparison programs, this would not be sufficient evidence that they are successful programs. Partly, this is because of a lesson from the NCLB era: test scores are a limited measure of success. And partly this is because MTR and Relay have narrowed their focus toward preparing future teachers to succeed on test-score outcomes and, in doing so, have likely sacrificed other areas of teacher preparation.

Scholars have argued for many years that the quality of teacher education programs should not be gauged by any single measure. Instead, quality should be determined by examining the costs and benefits associated with a variety of outcomes. These would include, for example, considering to what extent graduates of different programs are able to promote higher achievement test scores but also increased socio-emotional learning, aesthetic learning, civic development, creativity, problem solving and critical thinking abilities.

Another critical factor is retention: how much do graduates of different programs contribute either to teacher stability in schools or to disruptive “teacher churn”—especially in the high-poverty schools where graduates from the charter-affiliated independent programs primarily teach? Little is known in this area, in part because independent teacher education programs are so new that retention data on graduates is lacking. Research on teacher retention in alternative pathways generally is mixed, and it suggests that a complex set of
factors affect retention outcomes, including the relationships between the characteristics and abilities of the people being prepared, the quality of their preparation, and the conditions in the schools where they teach. 

Although claims are made that teacher retention is higher for alternatively certified than traditionally certified teachers, these analyses have not taken into account selection effects and the effects of school contexts. The most recent vetted analysis of teacher retention data nationally using Schools and Staffing Study (SASS) data shows, controlling for school contexts, that alternatively certified teachers are more likely to leave the profession than traditionally certified teachers. In the end though, claims about teacher retention that are not designed to distinguish program effects from both selection and school context effects, and that present only unadjusted turnover rates, are not very useful to policymakers. Broad statements about alternative certification programs are also not nearly as useful as analyses of specific programs or types of programs.

In addition, assessment should take into account not only benefits of particular programs but also their costs and unintended consequences. For example, there is clear evidence that one unintended consequence of the recent singular focus on improved test scores has been the narrowing of the curriculum, which has produced a range of negative effects. The same prioritizing of test scores has led to the “no excuses” classroom management practices emphasized in independent programs like MTR and Relay, and research has also demonstrated negative effects of such practices on students. Based on studies like these, a singular or overarching focus on raising student test scores often reinforces persistent inequities in public schools.

Raising student test scores cannot be considered an obvious good that is intrinsically more valuable or desirable than all other goals, especially given that it is already known that such narrow focus demonstrably comes at the cost of other legitimate goals—including the goal of reducing existing opportunity gaps for student learning in high-poverty areas. The evidence supports a more nuanced analysis of the costs and benefits associated with a variety of desired outcomes for teachers, students, and schools.

VI. Discussion and Recommendations

Advocates of deregulating teacher education and expanding 2.0 programs argue that university teacher education is a questionable investment, given limited evidence that those university programs are actually creating effective teachers. As noted above, however, the same is true of newer, independent alternatives: there is essentially no evidence of their effectiveness. That point applies to the five programs discussed here. That is, not enough is known to reach definitive judgments.

What does exist in the literature, however, is credible evidence about the characteristics of programs that are linked to desired outcomes for teachers and their students, including alternative certification programs. One example of a program characteristic that appears to be associated with high-quality programs is program coherence, which includes a shared understanding across the program of the specific goals of the preparation. Other examples of the characteristics of exemplary programs include extended clinical experiences that are carefully developed “to support the ideas and practices presented in simultaneous, closely interwoven coursework,” and “curriculum that is grounded in knowledge of child and adolescent development, learning, social contexts, and subject matter pedagogy, taught in the
In reality, there is as much or more variation in quality within program types than there is across types (although it does seem reasonable to assume that “quality” and “effectiveness” are likely to be defined very differently by programs focused on “market share” and “going to scale” than by a traditional, university-based program). As more is learned about which program features link to which desired outcomes, assessment of programs will be better informed and much more nuanced. Informed judgments about program quality—contemporary apocryphal claims notwithstanding—will have to wait until then. Funding for research that further illuminates the characteristics of high-quality university and non-university programs is an important investment that would help narrow the range of quality in these programs as state and national accreditation accountability systems incorporate what is learned from the research.

The call for more research to identify the characteristics of high-quality teacher education programs should not be interpreted as support for the continued expansion of independent teacher education programs until research somehow settles the issue of their quality. Fundamentally, the question of how high-quality programs should be defined is a question of values informed by, but not determined by, research.

It has been argued that raising students’ standardized test scores, in and of itself, should not be taken as the sole measure of success for teachers and teacher education programs. This brief has called for examination of the costs and benefits associated with multiple outcomes. Given the undisputed evidence of the negative consequences associated with an exclusive focus on raising student test scores such as the narrowing of the curriculum, and negative consequences for students’ psychological well-being of some of the controlling and punitive management systems taught to teachers in programs like MTR and Relay, policymakers should be very careful in lending support to non-university programs. The kind of teaching and management techniques that are taught in programs like Relay and MTR have been described as part of a “pedagogy of poverty” that reinforces the gap between those students who have opportunities to interact with knowledge in authentic and meaningful ways and those who do not.

Based on the above analysis, then, it is recommended that:

- State and federal policymakers should not implement policies and provide funding streams that privilege the development and expansion of independent teacher education programs unless and until substantive credible evidence accrues to support them. There currently is minimal evidence.
- State policymakers should be very cautious in authorizing “teacher preparation academies” under a provision in the new federal education law (Every Student Succeeds Act, or ESSA). Such authorization would exempt those programs from the higher standards for teacher preparation that states typically seek to enforce for other teacher education programs. Policies should hold all programs to clear, consistent, and high standards.
- Teacher education program quality should be determined by an analysis of the costs and benefits of multiple outcomes associated with the programs. Policymakers should thus reject the argument made by two of these five programs (MTR and Relay) that the sole or overriding indicator of teacher and program quality should
be students’ standardized test scores.

- State and federal policies that are designed to support the development of independent teacher education programs should include monitoring provisions to ensure that they do not contribute to a stratified system, where teachers serving more economically advantaged communities complete programs in colleges and universities to become professional educators, while teachers serving low-income communities receive only more technical, narrow training on how to implement a defined set of curricular, instructional and managerial guidelines.
Notes and References


5 Information about each program was obtained by reading everything on the program websites including following links and reading reports and articles about the programs. Interviews with a representative of each program were also requested in January 2016. During the winter and spring of 2016, interviews were conducted with a representative from Teach-Now, iTeach, and HTH. Relay and MTR did not respond to repeated requests for an interview, but in July 2016, they verified that there is currently no research available about their programs beyond what is discussed in this brief.

6 Currently alternative programs, including those not based at universities, prepare about one third of teachers in the U.S. despite the decline in university program enrollments. https://title2.ed.gov/Public/42653_Title_II_Infographic_Booklet.pdf


11 Different definitions of “alternative certification” programs have been used by policymakers and scholars. Some have defined alternative programs as those other than four or five-year undergraduate programs at colleges and universities while others have included university postbaccalaurate programs within the definition of “traditional programs.” Zeichner, K., & Conklin, H. (2005). Teacher education programs. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying teacher education: The report of the AERA Panel on Research and Teacher Education* (pp. 645-735). New York, NY: Routledge. The term “alternative program” is used here in a broad way to include the different definitions that exist in different states. Many scholars have moved away from the use of the term alternative and focus more on the specific characteristics of programs rather than on general labels. Grossman, P. & Loeb, S. (2008) (Eds.). *Alternative routes to teaching: Mapping the new landscape of teacher education*. Cambridge MA: Harvard Education Press.


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25 Now referred to as TNTP. Both TFA and TNTP continue to partner with universities, but TNTP now also does some of its own preparation and TFA partners with non-university programs like Relay in some locations.

26 The repeated approval of a waiver from the highly qualified teacher provision of No Child Left Behind enabled non-university programs to prepare teachers on their own without outsourcing some of the preparation to a college or university. https://www.washingtonpost.com/news/answer-sheet/wp/2013/08/27/how-the-public-is-deceived-about-highly-qualified-teachers/

27 For example, the Race to the Top Competition led to changes in the certification laws in many states that broadened the definition of who could be authorized to offer teacher education programs. Crowe, E. (2011, March). Race to the Top and teacher preparation: Analyzing state strategies for ensuring real accountability and fostering program innovation. Washington, DC: Center for American Progress.

28 Alternative certification programs based at IHEs are referred to by the U.S. Department of Education as “Alternative route programs not IHE-based.” U.S. Department of Education (2013, April). Preparing and credentialing the nation’s teachers: The secretary’s ninth report on teacher quality. Washington, D.C: Author. Because some of these programs partner with universities, the term “independent” programs will be used here to indicate those alternative programs that do their own preparation of teachers.

29 It is frequently argued that teacher shortages are a result of poor or not enough teacher preparation. This assumption has been challenged and it has been argued that the shortages are more a result of teacher attrition caused mostly poor working conditions and other factors other than teacher preparation. Ingersoll, R. (2003, September). Is there really a teacher shortage? Seattle, WA: Center for Teaching and Policy, University of Washington.


Chubb, J.E. (2012). *The best teachers in the world: Why we don’t have them and how we could*. Stanford, CA: Hoover Institution Press.


[http://nepc.colorado.edu/publication/teacher-education](http://nepc.colorado.edu/publication/teacher-education)

48 The Relay residency option is a two-year program where teacher candidates work under the supervision of a mentor teacher for a full academic year. In the traditional Relay model, teachers complete the program while they are serving as teachers of record fully responsible for classrooms.

49 Currently, only about one percent of candidates opt for the iTeach clinical option, choosing instead to become a teacher of record without prior training. Personal Communication, June 1, 2016 with Diann Huber, program founder.

50 The Relay Graduate School of Education (founded in 2011), Sposato Graduate School of Education (MTR) (founded in 2012), and the HTH Graduate School of Education (founded in 2007) are all authorized to award master’s degree by their respective states although only MTR and Relay offer Master’s degrees to teacher credential candidates. Teach-Now has also formed an independent School of Education to house its certification programs (Educatore), but it is not affiliated with any particular charter schools.


52 Retrieved July 10, 2016 from http://www.sposatogse.org/about/overview/


65 Mathematica is currently conducting a study of the effectiveness of graduates of Relay teaching in New York City on student test scores in reading and language arts. Also, the Center for Education Policy Research at Harvard Graduate School of Education is conducting a study of the graduates of the Match Teacher Residency in comparison with the graduates of other teacher education programs. At this time, no findings have been shared publicly from either study.


71 Retrieved July 18, 2016, from http://www.relay.edu/about/results

72 Retrieved July 18, 2016, from http://www.relay.edu/about/results


76 Retrieved June 1, 2016, from http://www.sposatogse.org/annual-letter/


http://nepc.colorado.edu/publication/teacher-education


http://nepc.colorado.edu/publication/teacher-education
In P.L. Carter & K.G. Welner (Eds), *Closing the opportunity gap: What America must do to give every child a chance.* (pp. 111-122). New York, NY: Oxford University Press;


http://nepc.colorado.edu/publication/teacher-education