

Producing High-Quality Teachers in Latin America

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While there is much agreement that high-quality teaching is crucial to high-quality education, there is much less agreement on how to produce high-quality teachers.

I. High-quality teaching is crucial to high-quality education

The argument in favor of a high-quality teaching force is strong, and based on global research. High-quality teachers significantly increase student learning, while low-quality teachers do not. The differences are large, and have a major impact on the social and economic performance and well-being of students ([Chetty, Friedman and Rockoff 2014](#); [Mourshed y Barber 2007](#); [Hanushek and Rivkin 2012](#)).

Prior to the emergence of this important body of research, most school systems had only one way of assessing teacher quality: years of education. The traditional approach worldwide has been to require that teachers receive several years of specialized education—leading to a teaching certificate—prior to entering the profession. The assumption behind this approach is

that teachers require some combination of theory, specialized knowledge, and practical skills to be effective. This approach rejects the idea that talented candidates can pick up the specific skills they need on the job, and adopts instead a train-and-certify model.

Under this model, the most common strategy worldwide for raising teacher quality has been to modify the kind, and increase the amount, of education required to earn a teaching certificate. Countries throughout the world have, over the past several decades, transferred teacher education from specialized secondary institutions (typically normal schools) to post-secondary institutions, such as teacher training colleges or universities, and required additional years of education.

Part of the motivation has been to add “a greater and more sophisticated component of theory” to teacher education ([Asia Society 2014, 6](#)). Another part has been the conviction that, with changes in the demand for skills worldwide (particularly demand for the “4 C’s”—Creativity, Critical thinking, Communication and Collaboration), and the need to cope with rapidly changing technology, teachers require significantly more, and more

PREAL Policy Briefs provide non-technical summaries of key topics in the field of education policy.

This policy brief reviews the global debate on how to produce high-quality teachers, and connects that debate with conditions prevailing in Latin America. It discusses diverse approaches to the selection of teacher trainees, the content and regulation of training programs, and the assessment whether trainees are competent to teach. The brief summarizes some of the most commonly recommended strategies, and argues for an experimental, results-oriented approach.

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diverse, education than in the past ([Schleicher 2012, 34](#)).

Countries have responded by increasing the amount of education required to become a teacher. Today, many require that teachers have a university degree or its equivalent. Some of the world’s most successful systems (e.g. Finland) require that all teachers have a graduate degree before they start work.

Latin America has generally followed this approach. All countries require that teachers have a fixed amount of formal training, leading to a teaching degree or certificate, in order to be hired ([Vaillant and Rossell 2006](#); [Louzano and Moriconi 2014, 16](#)). Since the 1980s most countries have moved teacher education “from secondary-level institutions (escuelas normales)...to universities and tertiary-level education” ([Bruns and Luque 2014, 117](#)). This “terciarización” of teacher education has raised the amount of formal education required of teachers, and has made teacher training a growth industry within the region’s higher education sector ([UNESCO-OREALC 2013](#)). In fact, enrollments in teaching programs account for a much greater proportion of higher education enrollments in Latin American than in Europe or Asia ([Bruns and Luque 2014, 108](#); [Vaillant and Rossel 2006](#)).

But while most of the world has made some combination of post-secondary education and certification its core strategy for producing high-quality teachers, there is little agreement on key details. Who should be admitted to teacher training? What kind of training should they receive, and in

what kind of institution? How should they be certified to teach?

Some countries permit almost any secondary graduate to enroll in teacher training while others limit entry to a chosen few. Some emphasize providing theoretical and disciplinary knowledge while others place at least some emphasis on practice. Some assume that anyone who graduates from teacher training is good enough to teach while others require a post-training examination or demonstrated success in the classroom before becoming a fully certified teacher. On these issues the norm is diversity and divergence rather than consensus.

Latin America reflects this diversity. Literally tens of thousands of public and private institutions provide pre-service teacher education ([Louzano and Moriconi 2014, 28](#)). These include faculties of education located within traditional academic universities; pedagogical universities that specialize in training teachers; higher normal schools that provide non-university post-secondary teacher training; and traditional normal schools that train pre-school and primary school teachers at the secondary level (and remain only in a few countries). Programs are diverse in content and length, although most require four to six years of study, with more years required of secondary-level candidates ([UNESCO-OREALC 2013, 39](#)).

These programs tend to be, at most, lightly regulated. Although many countries have

established some form of accreditation for teacher education programs, most apply only to public training institutions, or are voluntary, or attach limited consequences to the failure to become accredited. Some countries have established broad guidelines intended to orient program design, but do not require rigorous compliance ([Louzano and Moriconi 2014, 17](#)). Latin America’s strong tradition of university autonomy has often worked against efforts to accredit or regulate teacher training programs. In Peru, for example, only non-university teaching programs can be regulated by the state ([UNESCO-OREALC 2013, 44](#)). Several countries (notably Chile, Ecuador, Peru and Mexico) are seeking to strengthen significantly the regulations applied to teacher training programs. But the norm is still a “broad and heterogeneous array of teacher education programs with little regulation” (ibid. 42).

The combination of limited, vague and uneven regulation plus disagreement on how to produce high-quality teachers has generated diverse approaches to student selection, coursework and certification. Some countries require that applicants pass an admissions exam to enter teacher training. Some require that training

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programs meet specific standards. Some have established curriculum guidelines and/or teacher standards. Some require that graduates pass an examination prior becoming a certified teacher. But some do none of these. The norm in Latin America, as is true in much of the world, is diversity and divergence rather than consensus.

What is noteworthy about this highly diverse panorama is how different the approach that most countries take to training teachers is from the approach they take to training doctors.

Countries (worldwide and in Latin America) tend to be very deliberate about how doctors are trained, and to follow similar approaches. They regulate and license medical schools, set high standards for admission, mandate a demanding curriculum, establish several years of supervised practice in a residency at an affiliated

hospital, and condition full certification on passing written and oral exams in the student's specialty. This model, combining high admission standards, rigorous academic and clinical training, and exit exams, has been relatively successful in producing high-quality doctors throughout the world. Few countries, however, apply this model to teacher education.

II. Many countries fail to produce high-quality teachers

The diverse approaches to recruiting, educating and certifying teachers have produced diverse results. Countries such as Finland, Singapore and South Korea appear to do reasonably well at producing high-quality teachers ([Schleicher 2012](#); [Asia Society 2014](#)). In Finland, teacher education programs only accept students from

the top of the academic distribution, and public opinion polls consistently rank teaching as a high-prestige profession ([Sahlberg 2011](#)). In Singapore, all teacher candidates are drawn from the top third of secondary students. The students of all three countries are among the top performers on international tests of student achievement ([Mourshed and Barber 2007](#)).

Other countries have had less success. Dissatisfaction has been particularly strong in the United States, where Secretary of Education Arne Duncan recently stated that “By almost any standard, many if not most of the nation’s departments of education are doing a mediocre job of preparing teachers” and called for “revolutionary change, not evolutionary thinking” ([Walsh 2013, 20](#)).

The US Debate on Teacher Training

A heated debate on teacher education in the United States has been underway for nearly a decade. A 2006 report by Arthur Levine, former president of Teachers College at Columbia University, concluded that “...teacher education in the U.S. is principally a mix of poor and mediocre programs” ([Levine 2006](#)). The National Council on Teacher Quality, a non-governmental organization that rates teacher education programs nationwide, finds that “...the colleges and universities producing America’s traditionally prepared teachers...have become an industry of mediocrity, churning out first-year teachers with classroom management skills and content knowledge inadequate to thrive in classrooms with ever-increasing ethnic and socioeconomic diversity” ([Greenberg, McKee and Walsh 2013](#)).

These concerns have sparked a significant reform movement that advocates for higher admission standards, greater emphasis on clinical training, and post-training assessments that identify effective teachers before they begin teaching. A few state and local governments have begun to rethink their policies and, for example, to raise admission standards for teacher training programs at public universities. A group of U.S. education school deans recently established a [consortium](#) to align teacher preparation programs more closely with “demonstrable impact on student achievement and other common outcome measures.” The Obama administration recently proposed evaluating teacher training programs based on how their graduates perform in the job market, including their success in raising the test scores of their students. Frustration appears to be fueling a push for change ([Sawchuk 2014](#)).

But reforms have been strongly resisted, particularly by universities, which often see teacher preparation programs as “cash cows.” The programs are relatively inexpensive to run, have plenty of tuition-paying applicants, and face little or no accountability. Accreditation tends to be managed by schools of education with little incentive for high standards or reform. Governments have little direct influence on how teacher preparation programs are designed. Closures of teacher education programs have been rare—fewer than 60 of the 25,000 plus programs in the United States were closed between 2010 and 2014. ([Sawchuk 2014](#)).

Dissatisfaction with teacher quality is growing as well in Latin America and the Caribbean. A 2013 UNESCO report notes the “weak quality of teacher education programs,” which emphasize general knowledge over specific skills, and provide too little clinical experience. ([UNESCO-OREALC 2013, 51](#)). The report finds “a tendency toward open access with little consideration of academic or vocational requirements.” Students “...do not possess sufficiently developed linguistic and mathematical skills, nor the cultural skills more generally that are necessary to cope with the demands of higher education” ([UNESCO-OREALC 2013, 50](#)). A related paper concludes: “... the countries of Latin America and the Caribbean have a long way to go to develop teacher education policies and programs on a par with the more developed countries of the world” ([Louzano and Moriconi 2014, 44](#)).

These concerns have emerged even though the average education level of teachers in Latin America has risen considerably. The World Bank notes that in Panama, Costa Rica and Peru, teachers average more than 16 years of education. In 10 countries “...the average educational level of teachers is higher than for all other professional and technical workers, and is higher than the average schooling of office workers as a whole” ([Bruns and Luque 2014, 58](#)). Clearly, teachers are more highly educated than in the past.

But considerable evidence suggests that teacher education programs are not very selective, attracting students who are academically weaker than the average. Those who study teaching tend to come from the bottom third of

secondary school graduates, and have often chosen education after failing to qualify for their first choice of university study. In Chile, Colombia and Brazil, for example, the average scores of education students on university entrance exams are significantly below those of other disciplines.

In many (perhaps most) countries, the majority of education students do not qualify for entrance into the most selective universities (ibid. 59). “Rather than excluding interested but unqualified candidates, education schools today absorb students who do not achieve their first-choice course of study.” (ibid. 108).

The few tests we have of content mastery by teachers in Latin America suggest that many teachers fail to reach acceptable levels. In Peru, 84% of teachers performed at the bottom two levels in a test of content mastery in math, indicating they could not “establish mathematical relations and adapt routine and simple procedures and strategies” (ibid. 60). Equally discouraging is Chile’s performance in the IEA’s international study of teachers’ math skills. Its secondary school teachers scored lowest in content mastery and pedagogy, and its primary school teachers scored second-lowest. A World Bank report observes that, “Given that Chile is one of the LAC region’s highest-performing countries on international tests, these data leave little doubt that the region as a whole faces deep issues in raising the quality of its teachers” (ibid. 61).

The content of teacher training programs is also coming under fire. Analysts report that teacher training is

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“predominantly generalist, with insufficient content on understanding of curriculum subjects and related teaching skills and too much general educational content.” Programs often fail to provide students with “pedagogical content knowledge” i.e. the techniques that are specific to teaching individual subjects such as reading or math ([UNESCO-OREALC 2013, 50](#); [Louzano and Moriconi 2014, 24-28](#)).

They also fail to provide the clinical experience that would “enable future teachers to study how to resolve the real problems they will have to confront in the classroom” ([UNESCO-OREALC 2013, 52](#)). Many emphasize academic and abstract knowledge to the detriment of practical training. Uruguay and Peru, for example, require future teachers to spend just 40 and 50 hours respectively practicing in schools, compared to the 30+ weeks recommended by many international experts. Few countries have established a national minimum requirement for practice teaching—leaving many teacher trainees with little real contact with schools ([Bruns and Luque 2014, 118](#)).

Certification policies have also received significant criticism. Few countries have established standards of competence for teachers, i.e. a clear definition of what a teacher

should know and be able to do, and mechanisms to make sure that graduates meet those standards before becoming teachers. Some countries assume that all graduates of teacher education programs are qualified to teach. Several use tests to rank graduates, but do not key them to standards of competence, nor require minimum scores for certification. According to the World Bank: "No country in Latin America and the Caribbean today has a compulsory certification process for the teaching profession similar to those used in medicine or law—i.e. a test which prohibits those who do not meet its standards from being hired into the profession." Only one country—Colombia—comes close, requiring all that graduates take a competency-based exit exam in order to receive a teaching certificate ([Bruns and Luque 2014,122](#)).

Others, such as Chile, El Salvador, Mexico and Peru, are experimenting with new approaches ([Meckes 2014, 77-78](#)). In response to the region's lax approach to certifying teacher competence, UNESCO has urged countries to "establish objective and transparent competitions, with clear rules, to allot teaching positions, establishing rigorous selection criteria...taking into consideration teacher performance standards" ([UNESCO-OREALC 2013, 144](#)).

III. An emerging paradigm: a few promising ideas and many experiments

How best to address dissatisfaction with teacher quality is not clear. Four decades of research suggests that pre-service credentials do not predict the effectiveness of teachers in the

classroom ([Ganimian, Ho and Alfonso 2015](#)). Consequently, many respected scholars argue that we know very little about which teacher preparation strategies are most effective. Hanushek, for example, notes that "...credentials and qualifications—the objects of past policies—are not closely related to teacher effectiveness in the classroom..." ([Hanushek 2014, 28](#)). Murnane concludes that: "Pre-service credentials do not predict teaching effectiveness well" ([Murnane 2012](#)). Kane states flatly that "There are no model programs (at least none that are broadly recognized)" ([Kane 2014](#)). The World Bank concludes that "...no one teacher training model is consistently superior" ([Vegas, Ganimian and Jaimovich 2012](#)). It would be hard to find anywhere in the world a scientifically credible study that demonstrates a causal link between a particular teacher preparation strategy and the effectiveness of its graduates in the classroom.

A few promising ideas

Nonetheless, some experts argue strongly in favor of specific strategies for producing high-quality teachers. Their arguments tend to be based on intuition, theory, and the practices employed by successful education systems around the world, rather than on solid empirical analysis. Four recommendations appear repeatedly.

1. Raise standards for admission to teacher training

Most agree that it is important to attract the right people to the teaching profession. The world's highest-performing education systems set high standards for admission to training and select trainees carefully.

In many of these systems, most or all come from the top 30 percent of their age cohort.

To be sure, academic ability does not by itself guarantee effective teaching (indeed, research suggests that while the correlation is significant in a few countries, it is only mildly positive in many). But there may be a threshold effect. A minimum level of cognitive skills may be necessary (although not sufficient) to teach others effectively. When the academic ability of teacher trainees is as low as it appears to be in Latin America, it may seriously limit quality teaching.

These concerns have led many experts to recommend that school systems in Latin America raise requirements for entry into teacher training programs. Applicants could, for example, be required to come from the top half of their class, or to have a minimum score on national tests of verbal and mathematical skills, or on a standardized university entrance examination. The goal would be to set an academic floor for teacher trainees, and to raise standards overall.

Of course, making teacher training programs more selective would require making the profession more attractive to highly talented individuals. Countries would have to take concrete steps to increase the prestige of teaching, by raising standards, introducing accountability, and establishing working conditions suitable for skilled professionals. They would need to rethink their approach to teacher salaries, merit pay, performance evaluations, and tenure.

They would also have to exercise some control over the admission

practices of teacher education programs. Strategies might include establishing national standards for entry into teacher training, and offering scholarships to top students who choose to study teaching ([Bruns and Luque 2014, 111-117](#)). Some of these measures would likely reduce the number of students enrolling in teacher training, thereby reducing the revenues that training institutions receive. They would also encounter strong resistance from defenders of university autonomy. But just as countries restrict medical training to students with above-average academic skills, they might do the same for teacher training. Raising standards for admission to teacher training may be the nearest thing Latin America has to a “quick fix” in its effort to produce high-quality teachers.

2. Improve the quality of teacher training

Experts also agree that teacher training programs need to be improved. Two measures are frequently mentioned.

Strengthen content knowledge. Here the argument is that teachers must know a subject well in order to teach it effectively. They must be comfortable with the key principles and concepts, and able to explain them clearly. Those planning to teach math, for example, need a fluid and conceptual understanding of number systems in their various forms. Those teaching language must understand key elements of linguistics, including reading, writing and speaking. It is not enough for teachers to have a minimum understanding in the subject they teach. The proficiency of teachers must significantly exceed the

proficiency expected of students. This implies that teacher training programs must either provide trainees with the necessary content knowledge, or limit admission to those who have already attained adequate levels. Content knowledge is a prerequisite for quality teaching.

But experts also argue that knowing the “what” of teaching is not sufficient. Effective teachers must also know the “how”. This implies recognizing that good pedagogy is not always generic, but often specific to the subject being taught. Techniques for successfully teaching math are different from techniques for successfully teaching reading. Teachers must know what structures and explanations fit a particular subject. They must know how that subject is commonly understood and misunderstood by students, the difficulties they have in mastering it, and the instructional strategies that are most effective in addressing those difficulties. Teachers must not only master their subject, they must also master the pedagogy appropriate for teaching it ([Shulman 1987](#); [Wikipedia 2015](#); [Koehler 2011](#)).

Very few experts dispute the importance of content, and pedagogical content, knowledge in training teachers. But the content knowledge of teachers in Latin America appears to fall well below acceptable levels. Too many programs produce graduates who do not understand the subjects they teach, nor how to teach them.

Increase classroom practice. A second commonly mentioned reform is to provide trainees with more

classroom practice. The argument is that teaching is a clinical profession, and therefore student teachers need to practice repeatedly under the supervision of experts before they can be responsible for a classroom on their own. They need hands-on, real-time experience in relating to students, organizing activities, assessing progress and solving problems. That implies not just spending significant amounts of time in classrooms, but being observed, video-taped and critiqued by expert teachers who can provide feedback that will improve performance ([Asia Society 2012, 6](#); [OECD 2011, 20](#); [Bruns and Luque 2014](#)). The logic is the same as in training doctors. To be effective, they need experience in observing and treating actual patients rather than just theoretical or laboratory studies.

An important subset of this approach argues that teachers also need training in specific classroom management techniques. These tend not to be related to content, but instead address such common challenges as managing time, establishing efficient classroom routines, and controlling student behavior—all of which influence student learning. The argument is that teaching is an art (or perhaps, a craft) that requires careful attention to technique for success. Like athletes, artists and musicians, teachers become great by practicing and perfecting their technique ([Lemov 2010](#); [Puryear 2014](#)).

“They need hands-on, real-time experience in relating to students, organizing activities, assessing progress and solving problems.”

3. Regulate teacher training institutions

A standard approach to implementing the admission, content and practice reforms outlined above is to set high accreditation standards for institutions that train teachers. This implies raising admission requirements, establishing a curriculum that imparts the knowledge and skills necessary for effective teaching, and demanding high levels of performance. Many of the world's most successful education systems owe at least part of their success to a decision to establish and enforce high content and quality standards for teacher training institutions.

But even if accreditation standards are clearly beneficial, teacher education programs may be reluctant to adopt them. Their faculty and staff may lack the knowledge, skills and motivation necessary to meet the standards. Meaningful reform might be profoundly disruptive—requiring new staff, curriculum and even institutions—and provoke strong resistance from existing programs. Nonetheless, it is important to remember that countries have already found ways to compel minimum curriculum and quality standards in the training of doctors. They might consider applying similar strategies to improving the training of teachers.

4. Establish rigorous requirements for entry into the profession

A fourth reform would condition full entrance into the teaching profession on passing written and performance evaluations after training has been

completed. The approach is inspired by the medical and legal professions, which often require graduates to pass some combination of written and oral exams, and even a supervised residency, in order to become fully certified. Independent post-training assessments may be particularly important when teacher education programs are numerous, diverse and unregulated, as they are in Latin America. They can set high standards and make sure that only graduates who meet them be allowed into the profession.

This approach also helps address another problem that characterizes the teaching profession: the fact that we can't really identify effective teachers based on academic qualifications alone. Delaying certification until after formal training makes it possible to include non-academic measures, particularly direct assessments of a candidate's effectiveness in the classroom, in certification decisions. Directly assessing a candidate's teaching may be one of the most powerful tools we have to significantly improve teacher quality.

Many experiments

Perhaps the most interesting aspect of recent efforts to produce high-quality teachers has been the number of leaders who, although not necessarily rejecting the recommendations of experts, have opted for a deliberately experimental approach.

They assume that we have not yet identified the core knowledge and behaviors that make teachers effective, and therefore don't really know how best to recruit, train and

certify them. In response, they are trying to identify teacher training strategies that have a measurable impact on student learning, and to build programs around them.

A good example is [TeachingWorks](#). The program makes uncertainty its starting point: "There is little consensus about what constitutes good teaching. There is also little common understanding of the core practices and knowledge essential for competent teaching practice. Whereas other professions and skilled trades have identified the central components of work in their fields and organized professional education to train novices in that work, the teaching profession has not."

In response, TeachingWorks has identified a set of "high-leverage" practices and content knowledge that have demonstrated a positive impact on student learning, and requires that trainees master them before graduating. It is also developing a set of performance assessments that will indicate whether a novice teacher is ready to assume responsibility for teaching students. The core idea is that teachers, like airline pilots, should have to demonstrate proficiency in practices that are central to teaching before they enter the classroom.

A somewhat different example is the [Relay Graduate School of Education](#). Relay's approach is thoroughly practical: "...we believe that becoming a great teacher or principal is much like become a great musician or surgeon: It takes relentless practice, feedback and dedication." The program offers no instruction in educational theory or history. Instead, trainees are taught "teaching and

instructional leadership skills that have the greatest impact on student learning.” These skills have been identified by experienced, successful teachers, who serve as faculty members, coaches and mentors. Most of Relay’s training is online, in discussion groups or in supervised classroom apprenticeships. Trainees must demonstrate success in raising students’ test scores in order to graduate.

Yet another example is the [Sposato Graduate School of Education](#). Sposato compares its approach to music and sports training, emphasizing the “nitty-gritty details of teaching rather than broad theories of pedagogy and curriculum design.” A one-year program includes simulated teaching practice and feedback, along with highly prescriptive guidance regarding effective teaching techniques. Coursework consists of classroom management, building relationships with students and parents, instructional methods, subject-specific methods and working with data. The faculty is composed entirely of practitioners (experienced teachers and school leaders). Just a fifth of applicants are admitted, and only two-thirds of those graduate. Graduation requires demonstrating effective teaching based on principal evaluations, student achievement gains, student surveys, and assessments by external evaluators. Graduates teach full-time for a second year in Sposato’s network of partner schools, while completing an online course and receiving feedback from a Sposato coach.

These three programs have much in common. Each places results, usually defined as increases in student learning, at the center of its

curriculum. Each emphasizes practical training and experience over theory and philosophy. Each directly assesses candidates’ teaching ability before granting a degree. Together they may signal a broader movement toward more outcomes-oriented, research-based teacher training.

Combining the best current thinking with rigorous experimentation may be the best strategy for producing high-quality teachers. Here, the medical profession may offer useful lessons. It decided many years ago to organize the training of doctors around outcomes. The model it developed, which calls for high entry standards, regulating the supply of training, combining theoretical training with practical experience, and evaluating graduates before allowing them to practice, has had considerable success. The teaching profession might do well to consider a similar approach.

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