POLICY BRIEF

EMPOWERED EDUCATORS

HOW HIGH-PERFORMING SYSTEMS SHAPE TEACHING QUALITY AROUND THE WORLD

PREPARING PROFESSION-READY TEACHERS

NCEE National Center On EDUCATION And The Economy

CENTER ON INTERNATIONAL EDUCATION BENCHMARKING
LEARNING FROM THE WORLD'S HIGH PERFORMING EDUCATION SYSTEMS

scope Stanford Center for Opportunity Policy in Education

This paper is part of a series of policy and country briefs produced as part of *Empowered Educators* – a landmark, international comparative study of teacher and teaching quality in the world's top-performing education systems, commissioned by the Center on International Education Benchmarking® of the National Center on Education and the Economy®. For a complete listing of the materials produced by the *Empowered Educators* project, including a searchable database of recorded interviews and authentic tools, please visit www.ncee.org/empowered-educators.

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Research for the *Empowered Educators* study was coordinated by the Stanford Center for Opportunity Policy in Education (SCOPE) at Stanford University. SCOPE was founded in 2008 to foster research, policy, and practice to advance high-quality, equitable education systems in the United States and internationally.

Preparing Profession-Ready Teachers

For high-performing countries, developing prospective teachers' knowledge, skills, and dispositions is a critical element of their success. To be sure, the countries take great care to recruit highly able and committed individuals into teaching, to ensure that the most qualified students enter the profession. But they do not assume that ability or background alone will produce skillful, caring teachers. Strong preparation programs and intensive mentoring during the early years of teaching are essential.

The practices for preparation and induction vary in their details from country to country. And some countries place a stronger emphasis on one aspect than on others. For example, some countries – like Finland, Canada, and, increasingly, Australia – make sure teachers' initial preparation offers very intensive clinical training, while others – like Singapore and Shanghai – provide more extensive and heavily-mentored clinical training during the first year on the job. In these latter cases, the career ladder systems that place trained mentors in every school support this model. But all provide strong content and pedagogical preparation and expect teachers to be ready to teach well before allowing them to practice independently.

Moreover, all of the systems have continued to strengthen both pre-service preparation and induction. Furthermore, they manage the preparation and distribution of educators with a strong commitment to equity, so that all students can be taught by capable, caring teachers.

This brief will examine the practices for preparation and induction in five high-performing countries: Australia (particularly New South Wales and Victoria), Canada (Alberta and Ontario), Finland, Shanghai, and Singapore. It describes features that are unique to each and underscores themes that are common to all. Among these common themes are strong preparation in content and pedagogy connected to the common curriculum and diverse students to be taught, and well-mentored clinical experiences.

Preparation that Enables Professional Practice

High-performing countries invest heavily in ensuring that every teacher develops the knowledge and skills they need to be effective from the start. There are relatively few universities providing training in the jurisdictions we studied – 8 in Finland, 9 in Alberta, 2 in Shanghai, 1 in Singapore, for example – and these put substantial effort in preparing teachers to meet high standards. Because attrition rates for teachers are quite low in many of these countries, universities in those countries are not trying to prepare a large number of teachers who will enter and leave the profession quickly.

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In concert with governments, teacher-preparing universities are continually engaged in improving their own practices. A major aspect of this self-improvement in recent years has been to extend the duration and rethink the design of clinical experiences to make them more tightly connected to coursework and program goals and more expertly supervised. Stronger clinical training occurs both within pre-service preparation and, increasingly, once teachers are in their first year of practice, as part of a strong mentoring program. Together, these preparation and mentoring programs make up the learning-to-teach process.

Finland

Finland is the acknowledged world leader in pre-service preparation of teachers. Finland began its education reform effort many decades ago by moving teacher education to universities in 1971 and placing it in master's degree programs by 1978-79. At that time, many other countries in the world did not even require a bachelor's degree for all teachers, and even today, Finland is one of only a few countries that require a master's degree for all teachers – although many leading systems are now moving much more rapidly in this direction.

It is not the length of study that is most noteworthy, however. It is the nature of the highly intellectual and deeply clinical preparation all Finnish teachers receive that is extraordinary.

To begin with, the five-year program—three years of undergraduate study and two years of graduate study—is highly rigorous. All entrants must complete an examination that engages them in reading and interpreting primary research on teaching. For a primary school teacher qualification, students must complete coursework in the disciplines they will teach (which includes not only Finnish, mathematics, history, and science, but also drama, music, and physical education); pedagogical coursework; coursework on communication and language development; and coursework in research and analysis (which also includes the writing of both bachelor's and master's degree theses).

Rather than taking coursework divorced from pedagogy, primary candidates' broad and deep subject matter studies are integrated with how that content is taught. For instance, during the first year of the primary teacher education program, referred to as CLASS teacher education in Finland, students are taking rigorous coursework in the teaching of different subject areas that they will eventually teach, from Finnish to chemistry to mathematics. Simultaneously, students must take pedagogical courses, including a methods (or didactics) course; and two courses on child development (tailored for teaching, loosely translated as "Interacting with and Awareness of Pupils"

and "Introduction to Educational Psychology"); and engage in a series of gradually lengthening placements in the training school.

During those initial visits, student-teachers are learning how to observe children through assignments that require them to chart social relationships, to interview children, and to apply what they are learning in their child development courses. They are also asked to observe teachers' teaching and classroom interactions. Students are simultaneously taking coursework in the teaching of all the subjects that they will eventually teach (60 credits)—they also typically choose to also take a certain number of "pure" content courses (such as mathematics or Finnish) as part of their "minor subject" and "optional studies" (75 credits). This preparation—with a focus upon the teaching of subject matter rather than "pure" content courses—has been in place since the late 1970s and helps develop "pedagogical content knowledge."

The preparation also emphasizes learning how to teach students who learn in different ways, and teaching diverse learners, including those with special needs. It includes substantial emphasis on "multiculturality" and the "prevention of learning difficulties and exclusion" in courses like "Facing Specificity and Multiplicity: Education for Diversities" and "Cultural Diversity in Schools," along with a course on "Education and Social Justice" as well as on the understanding of learning, assessment, and curriculum development.

Finnish teacher preparation also includes substantial clinical requirements intended to provide lengthy opportunities to learn in real clinical practice. At least two of three clinical placement periods are at "teacher training schools" associated with the university's teacher education program. (See Table 1.) Much like teaching hospitals in medicine, these schools are designed to be staffed by expert teachers who can demonstrate research-based practices and who also continually engage in research and

Table 1: Clinical Requirements for Class Teacher Education Program, University of Helsinki

Period	Length	Activity	Location
First Year	Several days	Observing class; charting social interactions in a class; writing case study of a student; interviewing pupils	Teacher training school
First Year	3 weeks	18 lessons teaching Finnish and drama (9 lessons each in pairs for total of 18 lessons)	Teacher training school
Third Year	7 weeks	50 lessons teaching all subjects (50 lessons taught in pairs in math; science; history; gym; music)	Teacher training school
Fifth Year	7–8 weeks	Responsible for curriculum and teaching students all day	"Field school" or teacher training school

inquiry, connecting theory and practice. All eight universities throughout Finland have at least one teacher training school associated with them—there are eleven teacher training schools in total. They also work with other partner or "field" schools, which are organized to support teacher learning, but are run by the municipalities directly.

Another key feature of teacher education in Finland is the emphasis on research, inquiry, and analysis of teaching and learning—which includes the study of research methods and a master's degree thesis. These competencies are considered central to the development of professional teachers. This means that all courses integrate educational research, and for primary teachers, educational science is their major and the focus of their five years. They must take courses in research methods and inquiry, including a course in qualitative methods and one in quantitative methods, and must also write both a bachelor's and a master's thesis (for a total of 70 ECTS credits). Many students go on to earn doctorates, and most continue to teach in Finland's highly educated profession of teachers. Many of these features of Finnish teacher education have been spreading to other countries.

Prospective teachers in Finland must write both a bachelor's and a master's thesis. Many students go on to earn doctorates, and most continue to teach in Finland's highly educated profession of teachers.

Australia

The Finnish idea of creating much stronger connections between universities and partner schools – and between theory and practice – has taken root in several ways in Australia. In Victoria, most secondary teachers, and many elementary teachers, prepare in graduate programs, and these are moving toward two-year, rather than one-year, models allowing for much more extensive clinical training as well as coursework. (Whether in undergraduate or graduate programs, all preparation programs are four years in length.) Most Master's level teacher education programs also require or encourage a substantial research component, often a practice-based research project intended to develop inquiry skills needed to generate, analyze, and act on evidence as a basis of professional practice.

States and the federal government have also employed policy levers to improve the quality of initial teacher education over the last two decades, and these efforts have been a particular focus of recent national policy reforms. Since the early 2000s, state laws required teacher registration. To be registered, teachers must provide evidence of meeting the required competencies for teaching as measured against state, and since 2013, national teacher professional standards. These standards define what teachers should know and be able to do, and define teaching as a collaboratively engaged profession. They require teachers to know how students learn—including students from diverse backgrounds—have strategies for teaching indigenous students, be able to differentiate

instruction, and be knowledgeable about content. Programs must also be accredited to prepare teachers against the same standards, and accreditation requirements have also been put in place to leverage change.

The move to extend time for teacher education is also translating into more intensive opportunities for content specialization. Secondary teachers generally prepare in both a major and a minor content field of specialization. Historically, primary school teachers have been trained as "generalists," typically receiving a broad preparation to teach all but "specialist" subjects such as languages other than English, music, and physical education. The recent Teacher Education Ministerial Advisory Group report recommended that teacher education programs offer a specialization, such as mathematics, a science, or an additional language.[1] The intent of the specialization is that teachers will be able to share this knowledge with colleagues to build school capacity in these subject areas.

A number of universities already offer a level of subject specialization. For example, the Master of Teaching (Primary) at the Melbourne Graduate School of Education allows candidates to elect a specialization in mathematics or science teaching, the content of which comprises a quarter of the total program.[2] Other national and state initiatives have increased entry standards for new teacher candidates, established literacy and numeracy tests for graduates, strengthened the accreditation process, and established model agreements to increase the consistency of clinical placements.[3] Each of these steps can be viewed as part of a historical passage of increasing teacher professionalization that has taken place progressively over almost a century, but has accelerated in the past decade.

In line with these moves, New South Wales has undertaken a set of ambitious reforms. Starting in 2007, all teacher education programs in NSW underwent a rigorous assessment process designed to improve the quality of graduate teachers and ensure they have met the state's professional teaching standards. More recently, a new policy, known as Great Teaching, Inspired Learning, was enacted to offer a cohesive strategy to transform the way that teachers in New South Wales are selected, prepared, developed, evaluated, and compensated.[4] In 2012, NSW Initial Teacher Education requirements were further revised to incorporate the nationally agreed accreditation requirements for programs.

In addition, under the new policy, student-teachers will be supervised by teachers who have attained the "highly accomplished" or "lead teacher" levels based on national standards for teaching. The supervising teachers, moreover, will be required to undergo specific professional development to prepare them for supervising teacher-candidates. In addition, the new policy sets out expectations for outcomes of the placements, and calls for the development of evaluation tools to assess candidates' experiences in a consistent way across all institutions of higher education in the state.

Canada

As in Australia, teacher education in Canada is also increasingly occurring at the graduate level. In Ontario, all initial teacher education is provided by Faculties of Education, which are accredited by the Ontario College of Teachers. (The OCT also certifies teachers.) Until 2014, teacher candidates typically completed three or four years of undergraduate study and a one-year teacher preparation program at a faculty of education in one of two routes: concurrent (where teacher candidates simultaneously complete a Bachelor of Arts or Science and a Bachelor of Education) or consecutive (candidates apply to a Faculty of Education having already completed a Bachelor's degree). In 2013, however, the province revised its teacher education programs, to take effect in 2015, amid concerns that the previous programs were inadequate, particularly with respect to clinical experience. Under the new system, teacher preparation became a two-year program, with a practicum of 80 days, twice as long as the previous requirements, and many programs substantially exceed that framework. The reforms also added an enhanced emphasis on diversity and students with special needs, as well as an increased focus on the use of technology.

Programs typically prepare teachers to teach content in two divisions (primary/junior, junior/intermediate, intermediate/senior). At the intermediate and senior levels, pre-service teachers are subject specialists who have completed a concentration in one or more content areas prior to beginning the teacher preparation portion of their studies. Intermediate/Senior programs generally require students to complete two subject-specific methodology courses. Content areas can include a range of subjects such as business, computer science, English, family studies, math, science, French, geography, history, music, religion, technology, health, and art.

At the primary and junior levels, pre-service teachers may complete a subject specialization prior to beginning their teacher education but it is not required. Rather than subject-specialists, teachers in these levels are considered generalists who typically teach all subject areas. Primary/junior programs tend to employ a broad-based methodology course that covers the teaching of a host of subject areas.

In Alberta, eight of the nine approved teacher preparation institutions offer two-year post-baccalaureate programs that result in a credential to teach. A Master of Education degree takes around three years to complete. Most institutions also offer five-year dual or combined degree programs resulting in a Bachelor of Arts or Science and a Bachelor of Education degree. Some offer four-year undergraduate programs. Secondary education programs require both a major and a minor specialization, while elementary programs are broad and interdisciplinary, covering, at a minimum, English/French Literature and Composition, Canadian Studies, Mathematics, and Science.

As in other jurisdictions, there is a move to extend the length of study, especially clinical training, to better prepare teachers for the wide range of student needs. Many

teacher education programs are moving from an average of about 14 weeks of clinical training toward a 20-week practicum.

Alberta's commitment to high standards for teachers has shaped the province's approach to the new Teach for Canada, which aims to serve First Nations students. Unlike other Teach for All initiatives, where candidates begin teaching before they have received preparation, Teach for Canada will only include individuals who have already completed an approved teacher education program, plus additional training for working with FNMI students.

Singapore

Singapore revamped its teacher-education programs in 2001 to increase teachers' pedagogical knowledge and skills as well as their content knowledge. Singapore has been moving toward graduate-level training of teachers, with about two-thirds now completing a one-year master's degree program following the undergraduate content major, and one-third completing a four-year undergraduate program. All teachers, including those who will teach in elementary schools, must demonstrate deep mastery of at least one content area (plus study of the other subjects they will teach), and clinical training has been expanded. A new school partnership model engages schools more proactively in supporting trainees during their practicum experiences.

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The teacher-education curriculum includes study of the academic subjects teachers will teach; curriculum, teaching, and assessment; information and communication technology; teaching of language and academic discourse skills; character and citizenship; service learning; and research. Students in the four-year undergraduate program must obtain a major in an academic discipline, while those in the graduate program must have a degree in a discipline. Curriculum studies aim to equip student teachers with pedagogical methodologies for teaching specific subjects. Primary teachers are prepared to teach three subjects; secondary teachers are prepared to teach two.

All pre-service preparation in Singapore occurs in the National Institute of Education (NIE), affiliated with Nanyang Technological University (NTU). At the NIE, candidates learn to teach in the same way they will be asked to teach. Every student has a laptop, and the entire campus is wireless. The library spaces and a growing number of classrooms are consciously arranged with round tables and groups of three to four chairs, so that students will have places to share knowledge and collaborate. Comfortable areas with sofa-and-chair arrangements are designed for group work among teachers and principals, with access to full technology supports (e.g., DVD players,

video and computer hookups, and plasma screens for projecting their work as they do it). During the course of preparation, in both coursework and the practicum, there is a focus on teaching for problem-based and inquiry learning, on developing collaboration, and on addressing a range of learning styles in the classroom.

NIE's Teacher Education Model for the 21st Century (TE21), based on the standards for teaching, aims to prepare teachers for a heterogeneous student population, enabling teachers to be thinking professionals who can perform the multiple roles of 21st century teaching, such as knowledge organizer, motivator, facilitator, co-inquirer, and designer of the learning processes. The teacher education programs also emphasize values, reflecting the view that teachers should be ethical, adaptable, and resilient, and collaborative with colleagues.

In line with its strong emphasis on values, the NIE requires students to take courses in character education and to undertake a community service project. The project is conducted in groups of 20, and takes at least 20 hours, at the end of which each student prepares a tangible product. For example, a group that worked with the Retinitis Pigmentosa (RP) society, addressing a debilitating eye disease that affects approximately 10 percent of Singapore's population, raised funds to purchase assistive technology that can enlarge print for RP sufferers, which the society now loans to those who need it. Teachers in Singapore are expected not only to be masters of content and pedagogy but also to be contributors to the well-being of their students, families, and communities.

Shanghai

Teacher education in China is rapidly evolving from two-year college degrees common in rural areas to four-year college degrees, now held by just over half of teachers nationwide. In Shanghai, nearly all teachers (95 percent) have college degrees, with 72 percent from four-year colleges. Shanghai's teachers are largely prepared in the two normal universities—Shanghai Normal University, a provincial-run institution, and East China Normal University, a comprehensive university with national ranking.

Unlike many countries where undergraduate teacher education takes up two years of the college program, following two years of largely disconnected academic coursework, in China the full four years are fully packed from start to finish with focused training for teaching, which prepares teachers to be thoughtful, ethical, inquiry-oriented practitioners.

For example, at Shanghai Normal University, students typically take general education courses in their first year, comprising topics such as education history, sociology, psychology, moral principles, philosophy of education, educational research methods, education management, human resources development and management, social psychology, and family education.

In their second year of the program, students take foundational courses in their major field of study—social sciences, math and natural sciences, or performing and fine arts. Both primary teachers and secondary teachers specialize in subject matter content within content domains: the social sciences, mathematics and natural science, or performing and fine arts.

In their third year, students take pedagogy and teaching practice courses, which may include age-appropriate pedagogy courses, audio-visual education, basics of computer applications, handwriting (on paper and on the chalkboard or whiteboard), practicum in schools, and a practice teaching experience. At Shanghai Normal, they experience a two-week teaching practice placement in each term while continuing to take content and educational courses. In their fourth and last year of their degree, along with coursework, students spend eight weeks in an internship practice teaching, typically in schools considered to be high performing, so they will see best practices. The university also invites accomplished teachers of high rank to give lectures for the university students.

The curriculum for secondary teachers is similar in that it requires both courses in education and content specialization courses and an eight-week student teaching internship. Whereas primary teacher preparation is the responsibility of education faculty, secondary teacher preparation in the content areas resides in the various academic departments of the universities and only the pedagogical and education courses are taught by the education faculty.

During practice teaching, the teacher candidates have a guiding teacher or mentor in the school and a mentor from the university who is typically a professor. The candidates learn how to develop lesson plans, how to deliver a lesson, how to work with children, how to run a class, how to communicate with parents, how to use particular pedagogies such as story time or mathematics manipulatives, and how to recognize the areas that they need to work on in their teaching skills.

Induction

Although teacher-education programs are designed to equip teachers with the knowledge and skills they need to be able to teach successfully, educators know that teachers are not fully prepared for all they will encounter on Day One. Like doctors, who take part in internships and residencies following their medical school training, teachers need additional support to develop the broader repertoire of strategies and problem-solving knowledge and skills they need for their complex jobs. As a result, most high-performing systems have developed intensive programs of mentoring and induction for new teachers that provide helpful learning supports.

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Shanghai

Shanghai developed a formal induction program in the late 1980s. The program, created by the Shanghai Municipal Education Commission, reflects the Chinese cultural concept of luo dui qin, which means "the old bring along the young."

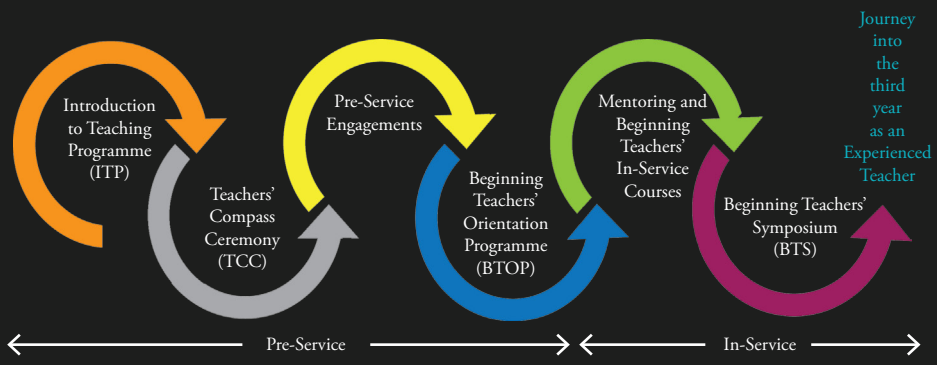
Under the policy, new teachers are given a one-year probationary period, during which time each is assigned a mentor who is selected based on experience and reputation as a highly skilled teacher. This experienced colleague works closely with the new teacher, guiding them through processes such as lesson planning, selecting teaching materials and methods, making decisions about student assignments, and giving feedback to students. The mentoring pair works together for a minimum of two hours per week.[5] Mentors also observe new teachers and new teachers are expected to observe their mentors in order to see models of highly-skilled instruction. Mentors keep records of their activities and they document the development of the beginning teachers for review by the school principal.

Given the school schedule structure, which permits most teachers to have at least 20 hours a week when they are not teaching children directly, mentors have time in their contractual day to work with beginning teachers and to make these observations possible. In addition, mentors are also evaluated through feedback from the beginning teachers and the expectations that the school leaders have for the development of the beginning teacher.[6] Schools generally also have a teacher serving as a professional learning coordinator who has responsibilities for structuring the mentoring pairs, organizing the teacher research meetings, and reporting to the district.

In addition to formal mentoring, beginning teachers have close contact with experienced teachers on a regular basis through teacher study and research groups. Teachers begin to participate in joint lesson planning sessions and are observed by peers on a regular basis, not just for the purposes of formal evaluation, but for the purposes of improving lesson design and hearing how experienced teachers think about instructional design and decisions. Participating in teacher working groups provides a method of socialization for new teachers into a community that shares a common body of knowledge, speaks a common language, and most importantly, shares a set of expectations for student performance and how to support them toward those goals.

At the end of the first year of teaching, teachers are assessed based on the observations made at the school level by the mentor and the school principal, as well as by written exams. Those who do not meet the assessment standards at the end of the first year are either not rehired or are delayed from moving to permanent status. When rehired after their probation year, it is very rare for a teacher to be released from the job or fired later in his or her career. Most teachers are evaluated as having potential to succeed.

Figure 1: MOE Teacher Induction Framework



MOE Teacher Induction Framework (AST, n.d.a)

Singapore

All new teachers in Singapore are immersed in a two-year formal induction program, known as the Beginning Teachers' Induction Program (BTIP), funded and managed by the Ministry of Education. (See Figure 1).

The BTIP starts, in essence, with the Teachers' Compass Ceremony before the start of preservice preparation, when prospective teachers have been hired by the Ministry and engage in ceremonies designed to reinforce the importance of the moral and ethical mission they have undertaken. BTIP picks up post-graduation with an Orientation program that helps them understand their roles and the expectations of the profession, reflect on their personal beliefs, values and practices, and highlight the importance of nurturing the whole child

Within the first two years, while they are being mentored within their school, beginning teachers attend in-service courses designed specifically for them, covering topics such as classroom management, parent engagement, teacher-student relationships, reflective practice, and assessment literacy. The two-year journey concludes at the end of the second year of teaching with the Beginning Teachers' Symposium. Entitled "What Matters Most: Purpose, Passion and Professionalism," the symposium calls for effective practices and strong commitment to teaching and marks the transition of the novice into the role of a professional.

The Structured Mentoring Program that supports beginners in their schools was launched in 2006 to level up the standard of induction and mentoring practices, which historically varied across schools, and enable beginning teachers to gain knowledge within a community of practice with the support of more experienced peers. The SMP is typically overseen by the School Staff Developer and/or school leaders. While novices are assigned a formal mentor, typically in their subject area, they receive support from others in the school, and more experienced teachers also receive mentoring assistance, as mentoring is considered a school-wide practice that benefits all teachers and encourages growth. Beginning teachers are typically given about 80 percent of the teaching workload of an experienced teacher to take advantage of these resources.

Mentors serve in three different capacities. First there is the mentor coordinator who leads the school's mentoring program and acts as the "mentor for mentors." Mentor coordinators also drive the staff development program so that the mentoring goals at the school level can be achieved.[7] Then there is the mentor, usually an experienced teacher holding the post of a Senior teacher who serves as a pillar of professional support for BTs as they continue to hone their professional competencies. Senior teachers have typically received training for mentoring, as it is a central part of their job; they provide technical assistance and modeling, socio-emotional support, professional development, resource sharing, and more. The Ministry of Education in 2011 created a program to improve the training of mentors, in cooperation with the New Teacher Center, a Santa Cruz, CA-based organization. Finally, there may also be a specialized mentor who serves to help BTs build knowledge and expertise in particular disciplines or skill areas.

In Singapore, the probationary period for BTs is one year. Once teachers are confirmed, they do not need to be re-certified or licensed. Thus, confirmation is analogous to having tenure.

Canada

Induction opportunities for teachers vary across Canadian provinces. While Alberta does not currently require or fund mentoring, most schools provide it: According to the 2013 TALIS survey of lower secondary teachers, formal induction programs are available for more than 80 percent of teachers new to teaching and informal programs are available to more than 80 percent of teachers new to a school.[8] The nature of these programs varies from school to school, however.

By contrast, in Ontario, all first-year new teachers hired to a permanent contract – and those that hold long-term occasional contracts (LTOs) – are expected to participate in the New Teacher Induction Program (NTIP). Established in 2006 and funded by the Ministry, NTIP includes: 1) an orientation to the school and school board; 2) ongoing mentoring by more experienced teachers throughout the first year; and 3) professional development and training appropriate to the needs of new teachers. Boards of education may decide to extend NTIP supports to the second year for either permanent hires or LTO teachers.

Mentors are selected for their teaching and mentoring skills and are expected to be trained within their district. The NTIP provides shared release time for mentors and new teachers to collaborate. This time can be used for co-planning, classroom observation, and collaborative assessment of student work, among other areas. Schools may choose from different mentoring models such as one-to-one mentoring and large- or small-group mentoring. Mentors provide guidance that is suited to the individual needs of the teachers, which can include demonstrating teaching strategies and offering coaching or feedback, goal setting, offering tips and advice around classroom management, being a sounding board for teaching strategies, providing

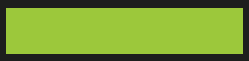
insight into the school climate and related politics, and offering emotional support during the first few days of schools. A major emphasis is on helping novices manage professional relationships and learn to seek out the resources they need for ongoing growth and development.

Mentoring is designed to be supportive, rather than evaluative. Principals conduct two performance appraisals throughout the first twelve months, and if not satisfactory, teachers are given up to 24 months to improve. While a small number of teachers are counseled out, a major goal is to help novices become expert and keep them in the profession. With that in mind, the Toronto School Board – the largest and most diverse district in the province – has extended mentoring for an additional two years beyond NTIP and has organized the program to offer demonstration classroom learning: focused observations, debriefing, action planning, and co-teaching opportunities in various grades and subjects, along with professional learning for mentors.

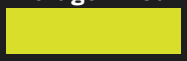
The results have been noteworthy. The Ontario College of Teachers, in its Transition to Teaching study, found a retention rate of new teachers of over 95 percent who renewed their licenses within Ontario.[9] (Of those non-renewing, most have left for other provinces with greater supply needs, but more than 80 percent hope to return to Ontario at some point.) Even more extraordinary is that the Toronto District School Board found that of the nearly 4,000 beginning teachers hired between 2005 and 2010, the district retained 98 percent to 99 percent of first-year hires annually.[10] By comparison, in the United States, most studies find at least 10 percent of first year teachers depart before their second year, and about 30 percent leave by their fifth year.

Five-Year Retention Rates for New Teachers:

Ontario >95%



United States Average <70%



Australia

As in Shanghai and Ontario, induction in the Australian states of Victoria and New South Wales is tied to full certification (known as "registration" in Victoria and "accreditation" in NSW). New teachers are registered at the "graduate" level of the Australian teaching standards and are awarded a provisional certification; they must show evidence that they have progressed from the graduate level to the "proficient" level of the national teaching standards within one to three years, depending on the state and whether they are in government or non-government schools.

Induction is well-established, having been launched and sustained since the early 2000s. NSW Department of Education and Communities has provided a teacher mentor program since 2003. The program employed 50 teacher mentors who worked across 90 to 100 schools that had a significant number of new teachers. These mentors were appointed to

schools and annually supported about 60 percent of the total number of newly appointed teachers in government schools. The evaluation of the teacher mentor program indicates that it has provided benefit in terms of both teacher quality as well as teacher retention. Other schools appointed mentors internally to support their novices.

Victoria tied induction to teacher registration in 2004, and it has become near-universal; well over 90 percent of provisionally certified teachers have received mentor support each year. Part of the support includes training in the Timperley cycle of reflective inquiry, the same process used in professional learning. Thus teachers in their induction period learn the process they will use throughout their career. The Victorian Institute of Teaching provides training to mentors around the knowledge and skills of mentorship; the two-day program, offered in the first semester of each year, has reached some 12,000 teachers over the past decade.[11]

In Victoria around 90 percent of provisionally registered teachers indicate they have made beneficial changes to their teaching through feedback from mentors and/or experienced teachers.

The mentoring system has been effective, according to teachers. VIT surveys have shown that around 90 percent of provisionally registered teachers indicate they have made beneficial changes to their teaching through feedback from mentors and/or experienced teachers. Ninety-four percent indicated that working collegially in the classroom with an experienced teacher had allowed them to see what good professional practice looks like, and had focused their professional reflection on engaging students and student learning. In addition to the benefits reported by mentees, over 95 percent of mentors agreed that had experienced professional learning benefits from their involvement with mentoring a provisionally registered teacher.[12]

As teaching policy has evolved in Australia, two things have enabled more productive mentoring. The first is the focus on professional standards – initially enacted by the states and then reinforced with the new national standards – which the states have attached to registration and accreditation of teachers.

The second major change was the provision of time for collaboration. Although teachers in Australia have less time free from teaching than those in Shanghai or Singapore, recent initiatives have created more opportunity for teachers to work together. Since 2004, under a collective bargaining agreement with the educators' union, new teachers have a reduced work load of at least 5 percent, equivalent to one to two hours a week. While mentor teachers do not receive additional release time under the AEU agreement, principals are required to ensure that assigned mentors are able to undertake this role within the context of a 38-hour working week.

New South Wales has recently gone further in funding two hours each week for all teachers – and four hours for beginning teachers – to enable collaborative planning, lesson preparation and assessment. Beginning teachers typically use this additional time to observe an experienced teacher's class, gather evidence of their teaching practice as part of their registration/accreditation process, hold professional conversations with their school-based mentor, or collaboratively plan lessons and assess student work.

Lessons Learned

Preparation programs are grounded in academic content, pedagogical knowledge, and professional standards. All of the programs described here ensure that all teacher-candidates have a solid grounding in disciplinary knowledge, as well as pedagogy. Undergraduate programs begin with coursework in the subjects candidates will teach. Graduate programs, which have become the norm in several of the countries, require teachers to have a bachelor's degree in one or more academic subjects. In most countries, secondary teachers prepare deeply in two content areas, with two majors or a major and a minor they will be able to draw on in their teaching. Elementary teachers are prepared across a wide range of content areas they will teach. This work is grounded in professional standards articulating what teachers should know, be like, and be able to do – including the moral and ethical commitments of teachers as well as their technical knowledge and skills. The standards create a framework for professional practice that shapes not only preparation but ongoing expectations and learning throughout their career.

Preparation programs are grounded in research and prepare teachers to use and conduct research. Research plays a major role in defining the profession in these countries: Research on learning, development, curriculum, assessment and effective teaching and learning strategies for different content and for specific populations of students provides a serious grounding for program design. Teachers are expected to read research and to use it in their practice. Furthermore, they learn to conduct research on practice and are expected to do so during preparation and throughout their careers. Action research is an important and growing element of professional training and practice in all of the jurisdictions we studied. In Finland, teacher candidates are expected to conduct a study and write a research thesis as part of their master's degree for entering teaching. Across jurisdictions, the goal is to prepare teachers who are conversant with research and research methods, which will enable them to become sophisticated consumers of research and also to be able to collect and analyze data on their own students and become reflective practitioners.

Preparation includes well-mentored clinical experience. All of the countries recognize that teacher-candidates learn the most about teaching when they are in actual classrooms working with expert mentors who model and coach candidates on the practices they are trying to develop. Many are emulating the model that Finland

launched decades ago, in which teachers spend their student-teaching time in teacher training schools that partner with universities, offer highly-skilled mentor teachers, and support research-based practices that are linked to the university's course work. At the same time, structured mentoring in the initial year or two of teaching extends clinical learning, a practice that is very highly developed in Shanghai and Singapore and has deepened across all the jurisdictions. In several jurisdictions, the induction process is tied to certification, creating a formal career continuum.

Preparation and induction are part of a system. The recruitment, preparation, and induction systems in countries such as Finland, Singapore, Australia, and Canada are aimed at making sure that teachers are ready to teach from the start of their careers. But they do not stop there. All of these countries have put in place well-structured systems to enable teachers to continue their learning during their career and to advance in their careers based on their abilities and interests.

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