



Preparing to Lead



Lessons in Principal Development
from High-Performing
Education Systems



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

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Preparing to Lead:

Lessons in Principal Development from High-Performing Education Systems

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The analysis presented in this report has been conducted by Learning First. The interpretation of how these systems operate are the authors' interpretations. They do not necessarily represent the views or official positions of governments, officials or advisors in the systems analyzed.

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Executive Summary

It has become a truism in the field of education to observe that of all in-school influences on student learning, leadership is second only to teaching quality. Indeed, when it comes to whole-system improvement, some argue that improving the quality of school leadership is a higher strategic priority than improving the quality of individual teachers, due to a principal's influence across a school.¹

While school leadership is routinely recognized as a key indicator for improving student achievement, there is less certainty around ways to develop outstanding school leaders at the scale required for whole-system improvements. Most systems of education have some form of training and development for school leaders.² The best systems, however, treat these programs within a leadership development continuum that includes recruitment of promising candidates, rigorous initial training and ongoing training and support with opportunities for advancement.

This report focuses on how four high-performing systems of education designed and deliver high-quality leadership development programs for aspiring principals. While these systems have a strategic, system-wide approach that positions programs within the broader continuum of leadership development, this report focuses on programs that prepare aspiring principals for their future roles and responsibilities.

The Challenge

No formula exists that guarantees effective school leadership practices or leadership development. The challenges facing principals and school leaders are dynamic, so the task for systems is to develop leaders who can manage school improvement and student achievement in a constantly changing and uncertain environment.

Leadership programs in high-performing systems reflect the systems' particular philosophy about ways that schools get better, how teachers are expected to behave to drive student learning and how best to distribute teacher accountability for school and student achievement. Program providers embed these expectations into the design of their programs for aspiring leaders.

In addition to being nested in the guiding principles of their own education systems, the programs in high-performing systems are organized around action learning. Action learning is a high-impact process of leadership development through which small teams work collaboratively on real-world problems of immediate professional concern.³ That process and the principles of effective adult learning are embedded in the design and delivery of the programs analyzed in this report. These programs are at the cutting edge of leadership training. They use highly meaningful action-learning projects to develop the skills and practices in aspiring principals that actually make a difference in their

later performance on the job. These programs maximize the opportunities for aspiring principals to engage meaningfully in their own development, learning in the context of actual day-to-day system needs.⁴

This report

This report begins with an overview of the latest research in leadership, which is primarily focused on business leadership. It finds that the best business research programs have the same characteristics as school leadership programs in the top-performing countries: they are highly contextualized and engage leaders in addressing real problems. The report finds, in fact, that some education systems can provide leadership development programs that far surpass those for generalist or executive MBAs.

Systems of education are particularly well-situated to develop effective programs, as they allow highly localized leadership development that can prepare aspiring leaders for specific roles in specific organizations. The best programs combine a detailed understanding of principals' real in-school roles and responsibilities with objectives for how the overall system of schools and the teaching profession should operate. They include high-impact teaching and learning activities. This simply isn't possible in generalist or executive MBA programs, which accept diverse professionals from multiple sectors who seek multiple workplace destinations.

The programs explored here build into their cores the system's strategies for how schools improve. While the programs have been designed to meet the needs of specific systems and therefore look very different in some respects, they nonetheless share common elements. These include attention to the complexity of schools and leadership practices, the use of effective adult learning practices, and action learning as a method of leadership development.

Key findings

- 1. High-performing systems structure leadership development to reflect their vision for schools.** The way a system expects its teachers to act (i.e., as a learning profession), the kind of schools the system wants (i.e., professional learning organizations), and the system's vision for how schools improve (i.e., the steps toward and accountability for school improvement) all have an impact on leadership behaviors required of effective school principals—and therefore on the design of high-quality leadership development programs.

2. **High-performing systems train leaders to manage professional learning organizations.** Top-performing jurisdictions often appoint teachers to leadership roles, particularly for curriculum and instructional leadership. This means the principal is not the sole instructional and curriculum leader, but instead appoints leaders and shares oversight. This role is embedded in program design.
3. **In high-performing systems, leadership development is tied to problems from practice that are actionable.** Programs analyzed in this report are at the cutting edge because they use action learning projects for leadership development. Such projects enable participants to develop leadership practices in a real school environment. They engage in a school improvement inquiry that directly reflects the roles and responsibilities of principals. Critically, they are supported by a serving principal who is often the principal of the host school. This leads to effective mentoring, as the mentor has a professional stake in the success of the candidate’s project.
4. **In high-performing systems, school leadership programs build skills for a dynamic work environment.** School principals work in complex professional learning environments that are dynamic and in constant flux. No formula exists for effective leadership in complex environments, so leaders need to develop resilience, critical thinking skills and the ability to adapt practices for new situations. Leadership development programs in these systems are not “content events” but are instead a way of defining the principal’s job as a continuous learning process.
5. **Leadership development programs in high-performing systems continue throughout a leader’s career.** Unlike most U.S. school jurisdictions, these high-performing systems take a systematic and comprehensive approach to leadership development that is career-long and system-wide. They actively identify, recruit and develop high-potential leaders from early in teachers’ careers, following them through to the system level. The programs considered here are part of a broader leadership development continuum for each system and have been designed to complement it.

Introduction

Improving school leadership is central to education improvement efforts. After teacher effectiveness, school leadership has the greatest in-school impact on student outcomes and is widely considered crucial to system reform.⁵ The 2015 Every Student Succeeds Act recognizes this and provides targeted funding to help U.S. states and districts set up strategies and actions to improve their leaders. But it is not clear what to do to achieve this, as many interventions have not had the success we would like.

The world's highest-performing school systems have all made extensive investments in school leadership development programs, and these provide some insights. Students in Ontario, Singapore, Hong Kong and Shanghai performed, on average, in the global top ten systems for student achievement in mathematics, literacy and science in the Programme for International Student Assessment (PISA) for 2009 and 2012.⁶

But these systems have not always been at the top of the world tables. Singapore and Hong Kong were once ranked 15th and 17th in reading literacy (PIRLS).⁷ Administrators' alarm then prompted significant reforms, especially in Hong Kong where major curriculum reforms were implemented. In Ontario, concern about student performance led to a system-wide literacy improvement strategy starting in 2004.

A key part of reform in all these systems was leadership development. With the exception of Shanghai, they all designed mandatory pre-service preparation programs for aspiring principals starting in 2000. Singapore's Leaders in Education program (LEP), Ontario's Principal's Qualification Program (PQP), and Hong Kong's Preparation for Principalship (PFP) program within the Continuing Professional Development Framework are gateway qualifications for principals aspiring to serve in these systems' primary and secondary public schools.

Shanghai's path was different, as its challenge was to upgrade the skills of an entire teaching and leadership force. That required an initial focus on training the existing workforce and their training for principals is conducted while they are new to the job and is less formalized than in the other jurisdictions.

This report shows how these systems now provide high-quality school leadership development programs that:

- Are tailored to reforms in each specific education system, so that programs vary to deliver the school leadership that each system needs;
- Design the training as a practical experience under the guidance of expert leaders; and
- Overcome the pitfalls of both leadership development in other industries and generalist and executive MBA programs.

These programs are only one component of the leadership development continuum.

None of these high-performing systems relies solely on leadership development programs to prepare great school leaders. By the time an aspiring principal undertakes the leadership development program in Ontario, Hong Kong, Shanghai or Singapore, he or she will have had opportunities for teacher leadership experiences and development within their own and other schools. These may involve sharing responsibility for school and curriculum improvement or participating in professional learning communities and networked teacher development.

In Singapore and Shanghai, aspiring principals will have had extensive curriculum and instructional leadership experience as part of their initial teacher training and development courses. Singapore ensures early development for teachers on the leadership track by assigning specific roles and responsibilities in the school improvement cycle; Shanghai does it through in-school lessons and research groups. This approach at the teacher leader level has an impact on how each system then develops school principals, and ultimately on the roles and responsibilities of principals and leadership teams.

System-wide and career-long investment in identifying and managing future leaders is in contrast to the United States, where much of the focus falls on in-service and instructional leadership development for current school leaders.

The way each system defines school leadership development is therefore contingent upon how that system organizes the broader school workforce and its development. Variables include talent identification and management; recruitment and selection protocols; in-service principal development and appraisal; and the pathways to system leadership roles for experienced principals, such as superintendent or supervisory officer roles.

In each system, pre-service principal preparation programs complement the broader structures and are designed in sequence and timing to support aspiring school leaders during their transition to being principals. Shanghai is the exception in that it requires a minimum number of continuing professional development hours for new principals, not a mandatory pre-service program.

In addition, all four areas conduct growth-based appraisals for principals and vice principals and have expectations for their further leadership development. Ontario and Hong Kong have different requirements and opportunities for principals within two years of appointment and for experienced principals.

Each high-performing system identified in this report therefore takes a strategic and comprehensive approach to identifying, developing and supporting great school leaders, beginning early in a teacher's career and continuing through to system-level leadership roles and development. The leadership development programs considered here are one

stage in this continuum. The other aspects of the continuum are outside the scope of this report, except where they have a direct bearing on principal preparation program design and delivery.

The authors of this report hope that detailing this achievement will help others who seek improved school leadership development programs in their own systems.

How to read this report

This report highlights key lessons from research into how four of the world's top-performing education systems designed and deliver world-class leadership development programs for aspiring principals. It is written with international policymakers, training and development providers and those with a stake in school leadership development in mind.

It is notable that in each of these high-performing systems, no single entity has sole authority over the design and delivery of the leadership development program. Instead, it is a partnership among government, universities and program providers.

Part I of this report discusses and analyzes common elements of these four programs and why they are so successful.

- Chapter 1 discusses trends and problems in leadership development programs across diverse industries, particularly in business schools, where most research has focused. Many of these programs are disappointing, as they are not focused on the actual contexts in which leaders work. But the four programs profiled in this report are grounded in the education system. They use not only mentorships and practical experiences, but also action learning methods. This chapter argues that the world's best school leadership programs are ahead of the game internationally and across industries and sectors in using action research projects based on adult learning principles.
- Chapter 2 describes ways that instructional leadership at the principal level differs among systems, in response to different expectations of teachers in each system. In general, high-performing systems invest greater responsibilities for curriculum and instructional leadership with expert teachers. This affects the level and type of leadership development required for principals.
- Chapter 3 analyzes program design and delivery of the school leadership programs in the four studied systems. It argues that structure and sequencing of these programs are critical in their effectiveness and reflect best practices in program design.

Part II presents the original case studies that led to the findings and analyses in Part I. These studies detail school leadership development programs in Ontario, Hong Kong, Singapore and Shanghai⁸ in both descriptive and analytic terms. They provide in-depth information on the system context, roles and responsibilities of school leaders, along with

their specific program objectives and design and delivery principles.⁹ The two parts are written to be complementary.

Every high performer has a history

“Leadership has made the difference in Ontario—it’s undeniable. We can trace it, feel it, see it.”

—Michael Fullan ¹⁰

School leadership development programs in high-performing systems are shaped to the needs of the system. Over the last 15-20 years, these systems have undertaken reforms that set expectations for:

- The ways the system wants teachers to act (as a learning profession);
- The kind of schools the system wants (increasingly autonomous professional learning organizations); and
- The system’s vision for the way schools get better (through requirements for improvement and accountability).

For instance, Singapore launched the *Thinking Schools, Learning Nation* agenda in 1997. Shanghai initiated the enormous process of de-politicizing the principalship with its Principal Responsibility System reforms starting in 1993. Hong Kong began its transition to School-based Management in 1991, and Ontario embarked on whole-system reforms in 2003.

These efforts changed what it means to be—and therefore to become—an effective school principal. Singapore, Hong Kong, Shanghai and Ontario prioritized school leadership development as a strategy for ensuring that the right people would lead their schools. The strategies were broad, targeting attraction, selection, ongoing development and retention of the kinds of people who could lead schools and the teaching profession to success in the new reform era.

Except for Shanghai (which requires new principals to undertake a minimum number of professional development hours within six months of appointment), the high-performing systems established pre-service programs for aspiring principals as part of these broader strategies.

Providers of leadership development programs in these systems considered the reform context and system objectives in their design and delivery of these programs. This makes sense. If the objective of a program is to prepare effective school leaders for work in a specific system, then it is critical to understand how that system wants principals to act and how it will hold them accountable.

The providers therefore designed programs for specific roles and responsibilities, going beyond a checklist of standards or competency frameworks. Instead, they focus on how aspiring principals need to act in order to role-model lifelong learning for the teaching profession within each system's specific setup and accountability procedures. They use long-term action research projects as the primary teaching and learning activity.

Such projects require aspiring principals to enact an instructional and organizational leadership role in a supported and challenging environment, one that reflects the contexts of principals in that system. In this respect, these programs are at the global cutting edge of leadership development, not just in education but across all sectors and industries.

Program overviews

Ontario, Canada – The Principal's Qualification Program

Aspiring principals in Ontario must complete the Principal's Qualification Program (PQP) prior to assuming a principal's position. Teachers with at least five years' experience can apply to undertake the PQP at one of the province's many providers. The PQP is designed by the Ontario College of Teachers, the province's self-regulatory body for the teaching profession. The College released new draft guidelines for the PQP in 2016.¹¹

The PQP objective is to prepare school leaders to serve as “critically reflective educational leaders who function effectively in dynamic, diverse and complex contexts” in Ontario's culturally diverse system.¹² The PQP has three core components. Parts I and II require 125 hours each, and the Leadership Practicum is 60 hours. Content for Parts I and II is organized around the five leadership domains in the *Ontario Leadership Framework*. Candidates can undertake Parts I and II at different providers, and must complete the Leadership Practicum prior to commencing Part II. The Practicum is an in-school collaborative inquiry project undertaken with the support of a serving principal or vice principal mentor. Candidates must demonstrate through the project that they have contributed to the school improvement goals for that year, taking the five leadership domains into account.

The PQP supports candidates in building their capacity for critical thinking and inquiry through use of key leadership theories that support the province's vision for schools—to be “ethical, equitable, just, inclusive, engaging and empowering learning environments.”¹³

The College of Teachers accredits multiple providers of the PQP, including the principals' councils, universities and some district school boards (in collaboration with the councils). To help providers design courses that meet provincial requirements, the College publishes program guidelines that outline the PQP's structural, instructional and evaluation requirements. To be approved, prospective providers design a course aligned with the standards, conceptual framework, and vision in the College's PQP Guidelines. Proposed courses are submitted to the College for accreditation and may then be offered to teachers.

Box 1 Programs and the Leadership Continuum: Becoming a Principal in Ontario, Canada

Diana Panagiotopoulos is a secondary school principal with the Toronto District School Board in Ontario, Canada. Having completed Parts I and II of the Principal's Qualification Program in 2001, Diana is now an instructor for the PQP offered through the Ontario Institute of Studies in Education at the University of Toronto (OISE). Diana is currently undertaking further supervisory officer training through the Ontario College of Teachers, the province's regulatory body that oversees design and licencing for the PQP.

Diana has held various leadership positions during her teaching career, each preparing her for the next with the support of leadership development programs. She was a classroom teacher for five years and a department head for four of the five. She then worked as a vice principal for three years before being promoted to principal. She has been a principal in two different schools, totalling ten years' experience.

Diana says she tries "to take every opportunity for learning that is offered" through the district school board, as well as taking courses with the Ontario Principals' Council. She values ongoing professional development and learning and emphasizes the importance of "supporting teachers working with students." She believes that collaborating with teachers and developing their skills is key to school improvement.

Diana recognizes that professional development and ongoing learning are fundamental for educators. Her experience has informed her view that it is her responsibility as principal to offer professional development to teachers because it is "beneficial to the system and to the individual's needs." She believes it is necessary to support teachers to achieve their full potential, even if it means that excellent teachers move on to other opportunities.

Similarly, Diana invests time mentoring vice principals and new principals, formally and informally, and creates dialogue with her vice principals for their leadership development. She sees her role as principal as supporting the ongoing learning of her teachers and teacher leaders so that they are better equipped to work with students.

For her own support as a serving principal, Diana draws on her professional networks and associations. She sees this as a highly important collaboration. Together, principals will "brainstorm ideas and strategies," discuss operational concerns and share resources such as staff handbooks.

Source: Diana Panagiotopoulos, correspondence October 2016.

Figure 1 Principal’s Qualification Program (PQP) Ontario, Canada

Principal’s Qualification Program (PQP)	
<p>Designed by the Ontario College of Teachers, the teaching regulatory body. The College develops guidelines for providers to design a PQP, which the College accredits.</p>	<p>Objective: The program is designed to “...support candidates in becoming critically reflective educational leaders who function effectively in dynamic, diverse and complex contexts characterized by rapidly changing circumstances.”*</p>
<p>Provided by multiple sources:</p> <ul style="list-style-type: none"> • Universities • Principals’ councils • Some district school boards partnered with councils 	<p>Selection: Aspiring principals apply directly to their provider of choice. Prerequisites include five years’ teaching experience; teaching qualifications in three of four school levels including intermediate (grades 7 to 10); and a Master’s degree or two specialist qualifications or one specialist and a half-Master’s degree.</p>
	<p>Program: The PQP has three core components: Parts I and II and a leadership practicum. Parts I and II are 125 hours each, organized around five leadership domains in the <i>Ontario Leadership Framework</i>. The leadership practicum is a 60-hour school improvement action research project undertaken in a school. Participants must demonstrate through the practicum that they have contributed to the school improvement plan for that year. It is an inquiry-based, collaborative project. Fees vary by provider, but are about CAN\$990 (US\$733) for each of the two parts.</p>

Hong Kong – The Preparation for Principalship Program

Since 2002, Hong Kong’s official leadership development and qualification requirements for principals have been structured around the Continuing Professional Development Framework. This framework lays out certification requirements for aspiring principals and ongoing professional development requirements for new principals (within the first two years of practice) and serving principals (those with three or more years’ experience).

Since 2004, all aspiring principals have been required to complete a Certification for Principalship (CFP). This involves three activities that must be completed within a two-year period:

1. Needs-Analysis program;
2. Preparation for Principalship program; and
3. Professional development portfolio.

This report focuses on the Preparation for Principalship (PFP) program within Hong Kong’s Certification process, but addresses all three activities in the case study in Part II. To help providers design a program that meets system requirements, Hong Kong’s Education Department Bureau publishes a PFP guideline.

Like the Principal’s Qualification Program in Ontario, which is organized around five leadership domains, Hong Kong’s PFP guidelines are organized around six core areas of leadership and Hong Kong’s policy context.¹⁴ Providers are required to periodically update their programs’ core content to address the needs of aspiring principals and Hong Kong’s changing policy and educational landscape.

The Education Department Bureau guidelines illustrate ways the six core areas can be adapted to principal development. At the certification stage, the six areas provide the modular backbone for content focused on school improvement and strategic planning and on Hong Kong’s requirements for teacher professional development and specific accountability mechanisms, such as the School Development and Accountability (SDA) Framework.

In line with the Continuing Professional Development Framework for principals, which foregrounds action learning, PFP includes a core action research component. Participants undertake a school-based action research project based on a fact-based “problematic aspect” of teaching and learning in the school. They then go through the processes of “planning, acting, observing and reflecting” on their project for improving the situation.

Figure 2 Preparation for Principalship (PFP), Hong Kong

Preparation for Principalship (PFP)	
<p>Designed by the Education Department Bureau (EDB), which develops PFP guidelines that providers use to structure an accredited program. The EDB accredits providers annually.</p>	<p>Objective: The Preparation for Principalship (PFP) program aims to “...build the capacity of aspiring principals to develop strategic, instructional and organizational and community leadership, as well as to establish sound beliefs and values that Hong Kong school principals should hold.”</p>
<p>Provided by multiple sources, including:</p> <ul style="list-style-type: none"> • Hong Kong Baptist University • Chinese University of Hong Kong • University of Hong Kong 	<p>Selection: Aspiring principals apply directly to the provider. Candidates must first complete a full-day Needs Analysis program, which may be offered as part of a program. Candidates must have at least five years’ teaching experience and a recognized teacher training qualification.</p>
<p>Program: The PFP program is one of three requirements for the certification process for aspiring principals in Hong Kong. The other two requirements are the Needs Analysis and a professional development portfolio and plan informed by the Needs Analysis. The PFP course is organized around six core areas of leadership that are part of the Professional Development Framework. Participants also undertake an action research project as part of the program. Action research projects occur in school and contribute to school improvement based on student learning data. Length and cost vary by provider. As an example, the PFP offered by the Chinese University of Hong Kong in 2017 costs US\$2,700.</p>	

Singapore – The Management and Leadership in Schools Program and the Leaders in Education Program

Nothing about school leadership development in Singapore is left to chance. Through a structured leadership track, growth-based performance management and milestone leadership programs, Singapore oversees the early identification and career-long development of leaders from the school to the system level. The National Institute of Education (NIE) plays a crucial role in this process.

Leaders in Education was launched in March 2001, replacing the older Diploma in Educational Administration program.¹⁵ Now widely regarded as a world-class executive school leadership development program, Leaders in Education was jointly designed by the NIE and the Ministry of Education to equip principals and Ministry personnel with the skills and capabilities required to lead school improvement and teacher development in the *Thinking Schools, Learning Nation* era.

The Leaders in Education program has received extensive international attention. But too often it is examined in isolation from the NIE’s milestone program for middle level leaders

Figure 3 Leaders in Education Program, (LEP), Singapore

Leaders in Education Program (LEP)	
<p>Designed by the National Institute of Education (NIE), with the MOE. It was launched in 2001 to replace the Diploma in Educational Administration to prepare principals for Thinking Schools Learning Nation.</p>	<p>Objective: “The programme aims to develop principalship capability that is values-driven, purposeful, innovative and forward-looking, anchored on strong people leadership, strategic management skills, and an appreciation of how principals could work effectively in a complex environment.”*</p>
	<p>Selection: MOE selects 30 to 40 vice principals and Ministry of Education officers annually, based on ongoing performance management reviews, situational tests and interviews. After the LEP, graduates return to their schools until placed in a principal role by the MOE. Participants typically have completed the MLS earlier in their careers.</p>
	<p>Program: The LEP is a 6 month full-time pre-service milestone program. MOE sponsors participants’ fees, including a 2-week international visit. LEP participants work in syndicates of 5 to 6 members with a NIE faculty facilitator. Key LEP components include:</p> <ul style="list-style-type: none"> • Compulsory modules (there are no electives); • Creative Action Project (a school improvement action research project undertaken in a school under the mentorship of the principal); • Talks and case study sessions; • Industrial and school site visits; and • Management Dialogue Sessions and sessions on Ministry objectives.
<p>Provided by the NIE. More than 40 NIE faculty members are involved in design and delivery.</p>	

Figure 4 Management and Leadership in Schools Program (MLS), Singapore

Management and Leadership in Schools Program (MLS)	
<p>Designed by the National Institute of Education (NIE), with the MOE. The MLS was conceived in 2006 and launched in 2007 to prepare middle level leaders to lead and manage teams and departments.</p>	<p>Objective: The MLS “...aims to create new knowledge in generative and collaborative learning, beyond a single discipline/ subject; enhance expert competence among middle level leaders, with reference to their position on the leadership track; and enhance capacity to lead teaching and learning through a learning team, focusing on continual improvement in the curriculum.”*</p>
<p>Provided by the NIE. More than 40 NIE faculty members are involved in designing and delivering the MLS.</p>	<p>Selection: The Ministry of Education selects participants each year. Candidates must have been in a teacher leadership role such as Head of Department, subject head or level head for at least one year.</p>
	<p>Program: The MLS is a milestone leadership development program for middle level leaders on the leadership track. It is a 17-week full-time program sponsored by the Ministry of Education. The MLS prepares middle level leaders for curriculum, management and leadership in schools, particularly as instructional leaders and to support the principal. The MLS includes these core components:</p> <ul style="list-style-type: none"> • Core module (fundamentals of leadership and management); • Elective modules (curriculum, assessment, stakeholder relationships, etc); • Curriculum project (action research by discipline in schools with a mentor principal); • Local organizations and school visits; and • One-week overseas study visit.

(which refers to teacher leaders such as heads of department and subject or level heads), the Management and Leadership in Schools (MLS) program. The MLS develops teacher leaders’ curriculum expertise, leadership and management skills, and the two programs are more integrated than commonly assumed. They share philosophies and adult learning principles (such as learning by doing), and can almost be thought of as two halves of one overarching school leadership development program that spans a teacher’s trajectory from departmental leadership to the principal’s office.¹⁶

The philosophy behind these milestone programs is “to develop educational leaders with the mindset and capacity to lead and manage change in a complex and evolving environment.”¹⁷

Together, the programs support teachers on Singapore’s leadership track through various in-school leadership responsibilities, culminating in the principalship. Both programs are full-time. Each includes a substantial action research project designed to give candidates experience in leading school improvement processes based on problems in student learning.

Shanghai

The principal's role in Shanghai is substantially different from that of principals in the United States and many Western systems of education. It is shaped by the many structures for teacher development, including career ladders for teachers, school-based lesson and research groups and performance management systems tied to the career ladder. No mandatory pre- or post-service qualification program exists for aspiring principals in Shanghai.

Instead, in keeping with expectations of teachers' continuing professional development, new principals agree to undertake 300 hours of professional development over the first six months of their appointment. Numerous programs and training options can contribute to this quota. Shanghai Normal University offers a development program for promising new principals, for instance, but this is just one option.

This qualification requirement does not require a substantial change in behavior for new principals because continuous professional development is fundamental to what it means to be a teacher in Shanghai. Rather, it is the kind of professional development undertaken, not the act of undertaking development per se that signals intent to seek school leadership. Principals are legally responsible for their schools and maintain teaching duties after appointment to the position.¹⁸

Unlike Singapore, the other system with structured career tracks for teachers and school leaders, Shanghai does not map milestone leadership development programs against the career ladder. There is huge variety in professional development programs for leadership development in the province, and the pathway is not tightly structured, so teachers experience considerable differences in their journeys toward the principal's office. That gives school leaders less of a cohort identity than in systems with mandatory qualifications. There are efforts in Shanghai to make principal development more structured and standardized, but this effort is just beginning. The case study in Part II gives an overview of some salient aspects. (The "View from the Principal's Office" article provides a personal narrative of the way one experienced Shanghai principal undertook training and development.)

Lesson and research groups (also called teaching and research units) at the school, district and provincial levels are central to leadership development and teacher professional development in Shanghai.¹⁹ The multi-level teaching and research unit structure at school and district levels can be a pathway for teachers to establish their expertise in instruction and curriculum improvements, and therefore to progress along the ladder to the principalship.²⁰

School leadership development programs that deliver more than the best business schools

It is a familiar scenario: Emerging leaders and senior executives head off for a transformative leadership development program to broaden their understanding and deepen their capacity to lead, only to default to their old practices once back at work.

It is a reality that plagues the very *raison d'être* of leadership development programs generally. Some of the most well-regarded programs involve a year or more of teaching and learning activities in different countries with international experts from a range of sectors and universities. Others involve a series of weekend seminars or after-hours workshops in a room of ambitious managers. Whatever the case, too often, organizations (and frequently individuals) are spending too much money on leadership development programs that do not foster real changes in behavior once the participant is back in the workplace – which is what leadership development should ultimately be about. This plagues even the most expensive MBA programs at the most prestigious business schools.

The problem with these programs is that they are de-contextualized. They don't relate either to the executives' particular workplaces or to their particular industries, so it becomes difficult to translate what they learn in the classroom to their daily tasks on the job.

The good news is that aspiring-principal preparation programs are well-positioned to overcome this challenge. Systems of education afford opportunities for highly contextualized leadership development programs to prepare a cohort of aspiring leaders for specific roles in specific organizations. Great programs combine a detailed understanding of principals' real in-school roles and responsibilities and system-wide objectives and goals for how schools and the teaching profession should operate, and they include high-impact teaching and learning activities.

This approach is fundamentally different from that of MBA and executive leadership development programs at business schools. Business schools prepare diverse participants from multiple sectors with myriad perspectives, professional roles and responsibilities. While there are advantages to off-site executive development, and while exciting and innovative practices are emerging at the world's best business schools, these institutions simply cannot provide the same level of situated and context-based teaching and learning and role-specific development that providers of school leadership development programs can.

To understand the quality of school leadership development programs in high-performing systems, it is important to comprehend the key issues facing leadership development in all industries. Business schools are the largest players in leadership development and are generally considered at the cutting edge of leadership learning experiences and program design. Business school programs are the primary focus of the literature on leadership development. Understanding emerging trends and the pitfalls of these programs helps us understand how school leadership training can improve. In fact, it helps us understand how and why school leadership development programs can and should be better than even the most expensive MBA programs.

Why some leadership development programs fail

Leadership development is big business. It is high-priority and high-cost, with U.S. companies in diverse sectors spending almost \$14 billion annually on it.²¹ Universities and business schools are the main providers, with business schools offering open programs as well as customized programs tailored to a company's particular needs.

But there is increasing disillusionment about the effectiveness of traditional leadership development.²² Many senior managers and CEOs have experienced “leadership development” that has not resulted in bringing effective leadership practices into their firms.

Research and industry wisdom suggest that recurrent issues limit the impact of many leadership development programs across a range of sectors. These include:

- Program focus is **too content-heavy** and does not allow enough time for the process of development;
- Programs have **little connection to the context and type of work** of the participant, creating problems of relevance and applicability;
- Leadership development is **isolated from key colleagues and stakeholders** in the participant's professional life, with whom leadership and decision-making processes are shared; and
- **Programs are too short** and are too often one time “content events” that boost leaders through intensive and interesting content but provide little opportunity for reflection, experiential learning or the ability to practice the new ideas and behaviors.²³

These issues are contributing to a decline in enrollment numbers at mid- and lower-tier business schools. In the aftermath of the 2008 global financial crisis, many people are newly questioning both the economic and training value of traditional management and business administration programs.²⁴

Box 2 Action Learning for Leadership Development

Since the early 2000s, action learning has gained traction across a range of industries and sectors as an effective method for developing leadership.²⁵ The establishment of the World Institute for Action Learning (WIAL) in 1995 was a critical moment in the ascendancy of action learning, which is defined as “a problem-solving and leadership development process that involves a small group working on a real problem, taking action and learning as individuals, as a team and as an organization while doing so.”²⁶

Though the literature varies, in general human resource development identifies six key components to effective action learning for leadership development:

1. A problem, challenge or task;
2. A group of four to eight people;
3. A questioning and reflective process;
4. Development of strategies and action plans;
5. A commitment to three levels of learning (personal, group and organizational); and
6. A coach, facilitator or advisor.²⁷

The National Agricultural Statistics Service at the U.S. Department of Agriculture and the U.S. Department of Commerce have designed, implemented and evaluated leadership development programs based on action learning.²⁸

In the business world, Boeing is widely viewed as a leader in harnessing effective action learning for leadership development. The Boeing Leadership Center launched its Global Leadership Program in 1999 to develop internal leadership capacity among executives to ensure the company’s future as an international aerospace leader. The first stage was to identify the competencies and leadership behaviors required of Boeing’s most effective executives. This led to three tiers of competencies:

- Most critical: adapting, thinking globally, building relationships, inspiring trust, leading courageously, aligning the organization, influencing and negotiating;
- Very important: shaping strategy, fostering open and effective communication, attracting and developing talent, driving stakeholder success, demonstrating vision and using sound judgment; and
- Important: driving execution, inspiring and empowering, working cross-functionally, focusing on quality and continuous improvement and applying financial acumen.²⁹

Boeing then adopted action learning as the method for developing these specific competencies among its senior-level executives. But Boeing is a company: it has the organizational capacity to develop in-house leadership development, tailoring action learning to its specific needs. Can action learning develop the collective capacity of leaders across a whole system of education?

This report shows that the programs in Singapore, Hong Kong and Ontario are global leaders in using action learning for effective school leadership development across all schools. In Shanghai, action research conducted in schools through lesson and research groups serves an analogous function.

Further, we establish the reason education systems can provide a form of effective action learning for leadership development that business schools cannot. This has to do with the nature of education systems as opposed to industries, organizations or markets.

Sources: Volz-Peacock et al (2016); Leonard and Lang (2010).

Promising signs and new trends in leadership development

Effective providers in business and other sectors are designing new programs that can avoid or resolve some of these problems. But even the world's best business schools struggle with this. Providing high-quality leadership development programs is hard.

Providers in all sectors face the challenge of designing a learning experience that offers participants knowledge that is relevant to their future job, while also providing them a “stretch experience” that takes them out of their comfort zone and back into it again. Leadership development programs have the potential to do some heavy lifting but need to be carefully designed to fit and serve the particular systems in which they operate.

A recent project examining future trends in leadership development in the private and public sector suggests that different trends are likely to emerge, spurred on by increasing scepticism about traditional methods. The study consulted 30 experts across private and public sector organisations, most of them faculty in education, law, business, government and psychology at Harvard University.³⁰

It identified four trends for leadership programs, emphasizing development as a process rather than a series of training events, and development of the whole person rather than leadership competence as an isolated area of competence. The trends are:

- 1. Movement beyond viewing development as technical learning.** Providers are starting to focus on more than just ways to develop new skills and acquire new knowledge but instead on promoting continued learning about new and more complex ways to think about new challenges.
- 2. Increased individual ownership of the development process.** This trend is underpinned by research showing the value of intrinsic motivation. Once a person feels “buy-in” to the process and has autonomy to make choices, an intervention is more likely to succeed. Employees choosing their own development initiatives and using peer coaching makes the experience relevant, practical, time-efficient and focused on their needs.

- 3. The rise of collective leadership.** The complexity of the challenges leaders face demands solutions that reach beyond one individual. Rather than looking to individuals to solve problems, people increasingly recognize that effective solutions come from networks and other collaborations. Leadership development programs must therefore focus on helping participants understand the value of networks and how to build and use them. This redefines leadership as something not embodied in an individual but as a process that emerges in groups of people.
- 4. Methods and processes based on innovation rather than on existing “best practices” or successful examples.** Innovation is defined as a solution or response that emerges from collective processes, beyond what an individual can come up with alone. This is consistent with what we all know: solutions developed by teams are likely to be more successful than any developed by one individual.

These trends reflect practices already well established in the world’s best school leadership development programs.

The world’s best school leadership development programs are at the cutting edge of new trends.

Systems of education are well positioned to avoid some of the pitfalls and challenges in leadership development discussed in the previous section. In fact, they are uniquely situated to offer very high-quality development programs because of two factors:

1. First, all participants of school leadership development programs will hold similar roles and responsibilities in similar organizations (i.e., schools). These belong to a broad system of education with the same accountability and reporting requirements, the same funding and resources and ultimately the same goal: improving student learning outcomes. Program providers can therefore prepare cohorts of participants for a *specific role in a specific kind of organization*. This is fundamentally different from business/executive leadership development programs. Such programs prepare candidates from multiple organizations and sectors, with diverse professional roles and responsibilities and less feedback—if any—from the organizations where graduates of the program go on to work. Those organizations are not part of a public system with a shared mandate and social purpose.
2. Second, schools are structured for collective, distributed leadership: the model of “heroic” or “charismatic” leadership simply does not hold in schools.³¹ School leadership development providers have focused on distributed leadership models and practices, without having to make the case for them in the first place.

What makes systems of education different?

In systems of education, multiple factors contribute to leadership development, for instance: mentoring, distributed leadership roles, collaborative inquiry, performance appraisal, a culture of continuous professional development and professional organizations.

Characteristics that make education systems different include the following.

- **Roles and responsibilities** for school leaders, including distributed instructional leadership roles, are clearly articulated by the ministry or government entity that employs the principals, using various mechanisms that include professional standards or frameworks, school improvement requirements and career tracks;
- All organizations (i.e., schools) in which aspiring principals will ultimately work belong to a **system of education** with the same objectives for improving student learning, the same accountability and reporting requirements, and the same funding structures, professional organizations, industrial environment, and agreed-upon steps for making schools better.
- When leadership development program participants undertake an **action research project**, it happens in a school over a period of months, not weeks or days. The teaching and learning activity is therefore not just relevant to participants' organizational context and ultimate roles as leaders; it is their organizational context and future responsibility. Action research projects are therefore an exercise in the exact practices that participants will use as principals. They are not a simulated setting or role-play activity: action research projects are real, in-school interventions aimed at changing teaching and learning to improve an aspect of school performance, under mentoring by the serving principal.
- **Continuous feedback** is possible between stakeholders, particularly schools, the government (as the primary employer of program graduates), program providers and professional organizations or representative bodies with a stake in school leaders and leadership development. These feedback loops help quality assurance and improve the program over time.
- **Cohorts or networks** of newly qualified principals can remain in touch after the program, providing a continued source of networked support and a shared professional identity that is particularly helpful in a principal's early years.

These system characteristics present both an opportunity and a prerequisite for high-quality program design.

By capitalizing on the opportunities afforded by an education system—clear roles and responsibilities, high-impact teaching and learning through action research projects, and direct engagement with system objectives—school leadership providers are leading the way not just for leadership development in education but in leadership development generally.

Box 3 Why Some School Leadership Development Programs Are Leading the Way

School leadership development programs can, and should, be better than generalist MBA programs at navigating the field's pitfalls and challenges.

Education systems involve extensive feedback between the providers of development programs, the employers of graduates (the government, district or ministry) and schools (the workplaces where graduates will take up a leadership role). This means that providers have a clear understanding of the specific roles, responsibilities and organizations that participants will lead. This is true to the extent that providers have access to the improvement-planning steps or the performance-appraisal mechanisms to which principals are accountable. The school leadership development programs profiled in this report have maximized the opportunities for designing an experience for aspiring leaders in systems of education that have clearly articulated needs, accountability structures and distributed leadership roles and responsibilities.

This is just not possible in generalist or executive MBA programs.

Partnerships and feedback loops: opportunities for program quality

In high-performing systems, no single entity or organization has sole authority over program design, content and delivery. Program design is therefore more collaborative, networked and complex than leadership development programs in many other sectors. Designers expect to respond to feedback from the government, ministry or districts and schools to improve program relevance to principals' work in that system. Hong Kong, Singapore and Ontario all have strong feedback loops and communication, providing a mechanism for quality control and program improvement.

In Hong Kong, the Education Department Bureau licences providers to deliver programs for the Continuing Professional Development Framework for principals. The bureau sets program content and design requirements based on ongoing research on school leadership practices under Hong Kong's system of school-based management.³² Providers compete on a yearly or biennial basis to deliver programs associated with the Framework. They are expected to update their content in line with new central policies or accountability requirements.

Singapore's Ministry of Education has an "enhanced partnership" with the National Institute of Education (NIE), the system's sole provider of milestone leadership development programs, and with schools. The Ministry and NIE worked together after the introduction of the *Thinking Schools, Learning Nation* agenda in 1997 and the *School Excellence Model* in 2000 to design the Leaders in Education program to prepare principals in the context of this new vision.

The Ontario Ministry of Education has input into the Principal's Qualification Program Guidelines, which are developed by the Ontario College of Teachers, the province's self-regulatory body. In turn, the College bases its work on the *Ontario Leadership Framework* developed by the Institute of Education Leadership. The Institute is a partnership including the ministry, principals' associations, directors of education councils and other stakeholders in leadership development. The College then accredits multiple providers to deliver the programs. Providers include the principals' councils and several universities, which tailor the Guidelines to deliver programs suited to each constituency (e.g., French, Catholic and public schools). These mechanisms provide further specialization in school leadership development that is rooted in the evidence-based practices of the *Ontario Leadership Framework*.

Shanghai is the exception in this report: it has no single pre-service program for aspiring principals. New principals agree to undertake at least 300 hours of continuing professional development within the first six months of their appointment. Leadership development occurs in multiple contexts, including numerous programs at the universities and district education bureaus.

Feedback across these systems ensures that the programs aspiring principals undertake are highly relevant to their roles and responsibilities once in the position.

So how do these programs avoid the pitfalls of leadership development?

A recurrent issue for leadership development programs is that they are too content-heavy and do not include the type of work and professional relationships that shape participants' efforts to lead changes in the workplace. In short, they fail to consider context.

The school leadership development programs profiled in this report do not just take context into account; they are designed to teach aspiring leaders to succeed in a shared context. They work with a professional cohort of aspiring principals who will undertake analogous roles in a specific kind of organization. Further, this cohort will typically work for the same employer—the government, ministry or district—that has communicated expectations for how they should act.

Context is more than content

These programs offer core and elective modules on the actual school improvement requirements and accountability processes mandated by the government, ministry or district school boards in that system. But what makes these programs exceptional is that context informs the teaching and learning activities (and not simply the content) of the program design and delivery. This is done through action research projects that occur in schools: these projects occur not in a simulated or typical learning environment, but in the actual kinds of organizations that graduates will be expected to lead upon program completion.

Box 4 Mentoring for Action Research

We all know that mentoring matters for effective leadership development. But systems struggle with getting the right people for the role: not all mentoring is equal. To overcome this, program providers in these high-performing systems have identified a mechanism for engaging highly motivated principal mentors.

Each program participant must complete an action research project in a school and the project must contribute to the improvement of the school. The principal of the school typically mentors the aspiring principal throughout. The school principal therefore has a clear incentive to develop the program participant and to improve the quality of the action research project, as it directly affects the principal's school's performance.

From the developmental point of view, there is a world of difference between mentoring that consists of monthly (or even weekly) catch-ups between the mentor and the aspiring principal and mentoring in which the principal mentor supports the candidate through an ongoing, problem-driven project in the mentor's own school. The professional stakes for the latter are high, especially because principals in these systems are accountable for the same school improvement plan that their mentees work on.

Mentoring a program participant through an in-school action research project is also effective professional development for serving principals. Principal mentors must share leadership over a vital aspect of school improvement, entrusting the participant to oversee an aspect of teacher professional development or teaching practices. They must communicate clearly what their own improvement goals are, including the data or processes they use to identify these goals, and their strategies for achieving them. This is a confronting exercise, which requires them to have difficult performance conversations and open up their own leadership practices to others.

When done well, action research projects provide effective development for aspiring and serving principals alike.

Action research projects are discussed at length in Chapter 3. The key point is that through action research projects, change management and leadership development are “enmeshed.”³³ Aspiring principals in these programs must engage with teachers and the broader school community and contribute to that school’s existing school improvement plans or processes.

Action research projects are typically mentored by the serving principal in the participant’s host school. This is critical, because it is that serving principal who is ultimately accountable for school improvement. He or she therefore has a vested professional stake in ensuring the action research project addresses a real problem in curriculum or student learning, and contributes to the school’s vision and improvement goals. This is what quality mentoring looks like (Box 4).

The action research project is based on a problem of practice in teaching and learning that is data-driven and derived from an actual problem in curriculum implementation or teaching and learning in the school. This is highly connected to participants’ real world jobs after the program.

Projects are also sequenced to build on participants’ learning the initial part of the program. They provide an opportunity for participants to develop their leadership mindset in collaboration with peers and colleagues, and occur over time, so that participants can reflect on their own assumptions and practices and try out new behaviors in a supported, relevant environment.

All this talk of quality and intentionality sounds great, but what does it actually look like?

Understanding what makes the school leadership development programs profiled in this report so good comes down to this: change management and leadership development are flip sides of the same coin.

In the business world, there is a growing recognition that change management and (effective) leadership development are not isolated processes. Writing for the Harvard Business Review in 2016, Quinn and Quinn explain that too many organizations (“a majority”) are failing to meet their own leadership development and change-management priorities because they treat them as separate challenges. They argue that you cannot achieve cultural change without leadership: “Efforts to change culture are [therefore] the crucible in which leadership is developed.”³⁴

Change initiatives require “a deviation from a dominant set of norms or behaviors.” This is hard, even with a clear rationale for change. The best learning environment for effective leadership development is one in which aspiring leaders attempt behavior change

in a way that is meaningful for their organization's core business, such as adopting new accounting practices or a new knowledge management system, or conducting formative assessment in a classroom. There is nothing abstract about this process: it is culturally and organizationally rooted in the aspiring leader's workplace and directly relates to issues of immediate professional concern.

Through partnerships with schools, school leadership development program providers can offer teaching and learning activities in the actual organizations where graduates will work after the program. At schools, program participants can therefore lead change initiatives where they enact the specific roles and responsibilities they will assume after the program, while being supported by an experienced principal mentor with a professional stake in their success.

Action research projects—which “enmesh” change management and leadership development—are therefore the crucible of high-quality leadership development in programs for aspiring principals in Ontario, Hong Kong and Singapore.

Aspiring principals are placed in a real school (where they do not necessarily have prior professional capital) and told to persuade teachers to change their daily practices to improve a specific aspect of student learning in line with school vision and goals. This is the crux of what it means to be an effective principal.

Aspiring principals must identify an actual problem of practice, holding difficult professional conversations with the principal and with teachers and using available assessment data. They then collaborate to develop, implement and monitor a strategy for improving the situation, which requires getting teachers to change their daily practices and cultural norms. This is hard. Teachers are busy, critical professionals already working towards a school improvement plan: unless they are convinced that the aspiring principal's proposal has merit, it will fail.

Instructional leadership varies between systems. This matters for high-quality program design.

Instructional leadership has been a dominant theme of school leadership research and development programs for well over a decade. Given its importance, it would be intuitive to assume that programs in high-performing systems focus more on instructional leadership than other systems. But this isn't necessarily the case. In fact, some of these programs focus much less on instructional leadership.

The reason is that these programs have been tailored to suit the needs of the system they serve. They assess system objectives and the roles and responsibilities of teachers, teacher leaders and school principals. This chapter highlights these links.

Instructional leadership in high-performing systems is distributed and highly collaborative; development programs are designed to reflect these divisions of responsibility. In Shanghai, Hong Kong, Singapore and Ontario, the principal is not the sole school instructional leader. Formal and informal teacher-leader positions—such as heads of department and subject heads in Singapore, primary school curriculum leaders in Hong Kong, lesson and research group leaders in Shanghai, and Student Success teachers and leaders in Ontario—have roles and responsibilities for instructional leadership and improving teaching and learning.

These teacher leaders receive targeted development in curriculum leadership and are expected to directly lead curriculum improvements at the school level. Multiple mechanisms solidify these responsibilities: leadership tracks or career ladders and specific planning and reporting processes. Aspiring principals in these systems have therefore typically received targeted training and/or in-school experience in instructional leadership before they undertake formal leadership development.

Once in the role, principals work closely with instructional leaders to design, implement and review the curriculum in line with student learning needs. Teacher leadership over curriculum and instruction has clear implications for leadership training and development: leaders at all levels need the right training at the right time.

This highlights the way programs are suited to specific systems and are not easily transferable. For example, Singapore's Leaders in Education program was designed in response to the Ministry of Education's strategic objectives in its 1997 *Thinking Schools, Learning Nation* agenda and the School Excellence Model of 2000. Under these models, distributed school leadership practices are clearly communicated: principals serve as "CEOs" of professional learning organizations, while teacher leaders (i.e., heads of

Box 5 Performance Development and Career Tracks in Shanghai Schools

Shanghai does not have a mandatory pre-service leadership development program like the other high-performing systems in this report. But the way its system objectives and distributed leadership structures develop leadership skills is a striking example of the ways that system-specific factors affect leadership development.

Shanghai is a world leader in teacher career tracks that reinforce the importance of professional learning. Teachers and school leaders in Shanghai engage in highly collaborative and effective professional learning throughout their careers. Classroom observation is frequent and collaborative research and lesson groups continually put the focus on ways that changes in teaching affect student learning. Reinforcing the lesson are performance development and career tracks that recognize key issues, such as instructional expertise, the ways people collaborate and develop others, and the quality of school-based research.³⁵

This is a form of school-embedded action research for improving teaching and learning and is what other systems only approximate. It has several implications for leadership development in Shanghai, because it affects:

- The pathway to leadership: only people in the top ranks of the teacher career path will be considered for school leadership positions. They will not reach these positions without extensive instructional expertise. Moreover, throughout their careers they will have completed high-quality school-based research, led collaborative groups that changed teaching practice and improved learning in schools, had professional conversations with teachers after numerous classroom observations, and mentored teachers to improve their practice. Unless they complete these tasks successfully, they are not promoted.
- The role and responsibilities of the school leader: School leaders are required to both facilitate and guide development activities and harness their output; for example, from research groups that analyze ways to improve instruction.
- The nature of learning and development throughout teachers and leaders' careers: Learning and development are structured and recognized in promotion decisions to reflect the participants' actual activities. All school leadership programs go to great lengths to situate learning experiences that reflect specific positions in schools, but Shanghai makes this part of the daily lives of teachers and school leaders.

department and subject and level heads) are responsible for curriculum leadership and improving instruction at the departmental level.

These reforms have shaped the way Singapore has designed and timed its milestone programs against the leadership track. The National Institute of Education designed a new Management and Leadership in Schools program for middle level leaders, or teacher leaders, in 2007. It prepares them for curriculum and strategic planning leadership in support of the principal leading overall improvement.

While the Leaders in Education Program is highly successful for Singapore, it would be much less effective in other systems that have different roles, responsibilities and training for teacher leaders in schools.

A lack of comparably clear distributed curriculum and instructional leadership roles and responsibilities for teachers in many U.S. states and districts could explain why some systems have a much stronger focus on foundational instructional leadership skills at the principal level than the development programs in these high-performing systems.

Distributed instructional leadership underpins development programs in Singapore

“While principals are viewed as CEOs, middle level leaders are seen as ‘middle-up-down’ leaders and managers. Middle level leaders have the responsibilities of creating and implementing concrete concepts to solve and transcend the contradictions arising from gaps between what exists at the moment and what principals hope to create in a dynamic learning system... Thus, through [the Management and Leadership in Schools program] we need to develop innovative curriculum leaders who can lead advances in all dimensions of the teaching and learning process, and accountable personnel who thrive on versatility, challenge, complexity and autonomy.”⁵⁶

Instructional leadership in Singapore is highly collaborative and distributed. The leadership career track illustrates a teacher’s pathway from the classroom through the various leadership positions to the system level. Distributed leadership roles and responsibilities articulated on the leadership track are reinforced with the School Excellence Model that calls on differentiated but collaborative leadership practices from the school’s senior leaders (the principal and vice principal) and key personnel (heads of department, subject and level heads, and School Staff Developers). This is illustrated in the Singapore case study in Part II of this report.

These distributed instructional leadership roles and responsibilities inform the way the National Institute of Education designs milestone leadership development programs. Teacher leaders in Singapore—including heads of department, subject heads, School Staff Developers and year heads—are responsible for curriculum reform and strategic planning for school improvement under the School Excellence Model. School Staff Developers are also directly responsible for teacher professional development tied to student learning

needs. These teacher leaders therefore receive targeted training, both through a “just-in-time” development course run by the Ministry of Education and in the milestone Management and Leadership in Schools (MLS) program at the National Institute of Education that focuses on curriculum, leadership and management.

Teacher leaders’ responsibilities for teacher professional development and curriculum reform has a bearing on how Singapore’s principals need to act for school improvement. The leadership team has shared but differentiated roles and responsibilities. One primary school principal in Singapore interviewed for this report said she does not consider herself the instructional expert in all disciplines. She can rely on the instructional leadership of her heads of department and on the staff development coordination of her school’s staff developer. Her role as principal is to articulate and communicate a whole-organization vision for student learning, and to cultivate a teaching and learning environment that supports the strategic planning and professional development managed by her teacher leaders, in line with the system’s vision and desired outcomes.

Singapore’s principals are trained in this “systems thinking” approach to school leadership—in relation to support from teacher leaders in strategic planning and staff professional development—at the Leaders in Education program at the National Institute of Education (NIE).

The NIE has been highly intentional in designing its programs for teacher leaders and aspiring principals. The MLS was designed in 2006 and implemented in July 2007 to prepare teacher leaders, to “lead and manage departments and teams more effectively.” The focus was to “build the capacity of middle level leaders to support school principals.”³⁷

“Effective teacher leadership cannot be achieved solely through teaching of competencies and theories of leadership and management. It must integrate skills such as collective knowledge inquiry and professional conversations. It is the presence of a collective order and coordination that is necessary for the development of an innovate and learning school.”³⁸

The National Institute of Education goes even further, however: program architects have used these distributed, instructional leadership roles to guide action research projects.

As noted above, heads of department undertake a 10-week action research team project for curriculum reform in the MLS program. Working with principals in their host school, the Curriculum Project team identifies problems and real issues in curriculum design or implementation in the school and then collaboratively develops an authentic curriculum project aimed at solving the problem(s).

Aspiring principals, the “CEOs” of professional learning organizations, undertake an action research project that considers the whole organization as part of the Leaders in Education program.

Box 6 Distributed Instructional Leadership

There is a strong argument that teachers *should* be developed as curriculum leaders because they are at the forefront of implementing curriculum and have more direct interactions with students than principals.³⁹ They are potentially better placed than principals to improve curriculum in response to learning in the classroom.

One way of seeing how distributed curriculum leadership might function across a school leadership team is, as Glickman suggests, to consider the school principal to be “the leader of teachers as curriculum leaders, rather than the sole curriculum leader.”⁴⁰

This conception would change curriculum development, implementation and improvement at schools—and therefore the kind of training that school leaders at all levels ought to receive at particular stages of their careers.⁴¹

High-performing systems embed distributed leadership structures through various system mechanisms (leadership tracks or career ladders, formal and informal teacher leadership positions, and school improvement and accountability processes that require specific roles and responsibilities for teacher leaders and school principals). In turn, teacher and aspiring principal leadership development programs are shaped to suit these specific roles.

Source: Kiat et al (2016); MacPherson and Brooker (2000).

Holding difficult professional conversations is crucial for effective school leadership at all levels in Singapore. Attention to professional conversations is therefore a priority for programs for both teacher leaders and aspiring principals.

Sounds great, but my system does not look like that...

Most systems don't have Singapore's “enhanced partnership” between the Ministry, training provider and schools—or a leadership track for cultivating outstanding school and systems leaders.

The good news is that school systems do not need formal career tracks to identify and groom talented potential school leaders existing leaders in talent management and development. In a 2014 survey, aspiring principals in Ontario's Principal's Qualification Program emphasized the importance of prior formal and informal leadership roles in their own journeys toward becoming principals.⁴²

In Ontario, the school principal is accountable for goals in the annual school improvement plan. School principals share responsibility for planning, implementing and assessing strategies for achieving these goals with the school improvement team or steering committee, which is typically voluntary. It can include the principal and vice principal, Student Success team (at secondary schools), literacy and numeracy teachers, and subject/grade heads.

School improvement steering committees can call on Ministry expertise at the improvement planning stage. The Student Achievement Division at the Ministry of Education includes the Literacy and Numeracy Secretariat and the Student Success/Learning to 18 Branch. These house educational leaders who work across the province to support school and board improvement planning. Student Achievement Officers work with school improvement steering committees to set ambitious, targeted goals based on student learning needs and system objectives. The officers work with school leaders to build their capacity (through professional learning, partner initiatives and funding) and to implement and monitor strategies for literacy and numeracy.

For each school improvement cycle, the principal typically appoints one teacher per goal to implement, monitor and assess the effectiveness of the strategies chosen for achieving that goal. These teacher leaders collaborate with school colleagues and Ministry officers to identify goals for student learning based on student data and classroom and system data. They help devise strategies for achieving the goals and implement and monitor the strategies over the school year.

Being involved in this improvement cycle is an intense form of in-school leadership development for teachers in the school.

The Ontario College of Teachers takes these practices into account in designing Ontario's program for aspiring principals. The College organizes its Principal's Qualification Program content around the five leadership domains of the *Ontario Leadership Framework*:

- Setting directions;
- Building relationships and capacity;
- Developing the organization to support desired practices;
- Improving the instructional program; and
- Securing accountability.

All domains share a clear focus on shared and distributed leadership for school improvement, and collaborative styles of leadership and working. As in Hong Kong, however, these leadership domains provide the scaffold only for content that addresses highly specific material in the system's school improvement and accountability requirements.

Under "Securing Accountability," for instance, Ontario's Guidelines for the Principal's Qualification Program note that "the principal is specifically accountable for the goals set out in the School Improvement Plan." This does not mean that she or he assumes sole responsibility. Instead, aspiring principals explore conducting the plan collaboratively, drawing on collective leadership practices.

The content addresses, for instance, how principals can:

- **Collectively** implement data collection and management and analyze strategies that inform and support classroom and school improvement planning;
- Critically and **collaboratively** analyze school plans to improve student learning, well-being and achievement assessment results;
- Foster a school culture that supports **teacher leadership**, instructional creativity and pedagogical innovation;
- Foster a professional learning community that **shares responsibility** for the learning of all students; and
- **Collaboratively** examine innovative communication processes and protocols to support engagement and **shared leadership**.⁴³

While principals in Ontario are ultimately accountable for the student learning in the school, they can—and should—foster “shared leadership,” “collaborative processes” and “collective responsibility” for student learning and school improvement. The Principal’s Qualification Program has been designed to help them do that in the context of the system’s vision for education and opportunities for shared leadership afforded by Ontario’s accountability structures.

Hong Kong introduced a new leadership role (and program) to aid curriculum reform

The Hong Kong Education Department Bureau relied on distributed leadership structures within schools to implement its large-scale curriculum reforms and system objective of turning schools into dynamic professional learning communities.

With its proposed ten-year plan for curriculum reform, released in 2000, the Curriculum Development Council placed significant demands on the existing teacher workforce. Teachers were expected to adapt to short-, mid- and long-term changes directed at developing a school-based curriculum and a vision for lifelong learning.⁴⁴ For many, this sweeping curriculum reform, on top of other Education Department Bureau initiatives, was a frustrating and disempowering experience.

In 2001, the Chief Executive of Hong Kong therefore announced a new school-based leadership position to complement curriculum reform in primary schools. The new post was initiated at least in part to reduce the burden on existing school leaders and to address teacher concern over the pressures of whole-system reform.

This new senior teacher post was labeled the *primary school curriculum leader*. These leaders were tasked with formulating curriculum development strategies and leading curriculum reform.

In the primary school leadership structure, this new post fits immediately below the principal (and below the deputy principal when it was inaugurated in 2008), and above existing senior teachers. The senior teacher rank was culturally necessary for the new position to be respected within existing school structures.

The primary school curriculum leader scheme was launched as a three-phase pilot, running from 2002 through 2005. In February 2006, the Education Department Bureau announced that the primary school curriculum leader would become a permanent post, effective with the 2007 academic year.

The first cohort of 232 primary school curriculum leaders was appointed in 2002. By the end of 2005, there were 610 such posts, indicating the nearly all primary schools in Hong Kong had one.⁴⁷

Primary school curriculum leaders have assumed broader leadership responsibilities than the original duties envisaged for the role. Today they are leaders of teacher professional learning within schools. They play a key role in ensuring schools are dynamic professional learning communities, as envisioned in Hong Kong's school-based management accountability and autonomy structures. The distributed leadership roles of school heads, primary school curriculum leaders and senior teachers are illustrated in Figure 1 on the next page.

School heads in Hong Kong are trained in leading curriculum leadership teams with these distributed roles and responsibilities. The Preparation for Principalship program at Hong Kong Baptist University, for example, has a core module on Learning, Teaching and Curriculum. In this module, aspiring principals explore how to “coordinate school programmes to achieve coherence across the curriculum, learning and teaching.” For aspiring primary school principals, this involves working with the curriculum leader and senior teachers. Further, under the Staff and Resources Management module, aspiring principals explore “how to create a collaborative team management ethos,” including aligning human, physical and financial resources “towards the goals of school improvement and student achievement.”⁴⁸

How were the new primary school curriculum leaders identified and developed?

The success of the primary school curriculum leaders pilot program required considerable up-skilling of the existing teacher workforce. The Education Department Bureau designed specialized leadership development programs to provide the professional knowledge and expertise needed to successfully implement curriculum reform.

The first cohort of primary school curriculum leaders underwent 100 hours of this targeted training in 2002. A portion included team training with their school principals. That helped ensure a coherent understanding and approach to reform and demonstrates how collaborative curriculum leadership has implications for training and development.⁴⁹

Figure 5 “Change agents” in Hong Kong Schools: Distributed Leadership Across Primary School Leadership Teams

School Heads	Primary School Curriculum Leaders (PSCs)	Senior Teachers and Panel Teachers
<ul style="list-style-type: none"> Plan curriculum Set targets & priorities for development Build up a good learning environment Nurture staff's curriculum & instructional leadership Set targets and phases for organizational change Value quality rather than quantity in teaching and learning Create curriculum, space and time for teachers Manage resources & enhance transparency in deployment of resources Coordinate departments & support the autonomy of departments Commend progress & improvements made Communicate effectively with staff Remove barriers Share knowledge & experiences Communicate with parents 	<ul style="list-style-type: none"> Assist school heads to lead & coordinate whole school curriculum planning & facilitate implementation of plans Support school heads in planning & coordinating assessment policy & practices Lead teachers/specialist staff in improving learning & teaching strategies & assessment through collaborative lesson preparation & professional development programs Promote a professional exchange culture within schools & link with other schools for sharing experiences in learning, teaching & curriculum development Assume a reasonable teaching load (about 50% of the average) for piloting different learning, teaching & assessment strategies for further curriculum development 	<ul style="list-style-type: none"> Lead curriculum and instructional changes Support the professional judgment of teachers Keep abreast of the latest developments Liaise with other KLAs to co-ordinate across subject areas Manage resources & their flexible use Share issues, knowledge & experiences Facilitate professional development Commend success & provide appropriate feedback

Source: Adapted from Hong Kong Education Department Bureau School Administration Guide (2015-2016)⁵⁰

The Education Department Bureau has offered a version of this program each year since the inaugural cohort. As in the Preparation for Principalship program, action research projects are a key component.

The program for the primary school curriculum leader cohort of 2012-2013, for example, included two components, described below. Candidates were required to successfully complete component A before proceeding to B1 and B2.

- A: Introduction to curriculum leadership and management, a series delivered by the Education Department Bureau (30 hours)

- B1: Curriculum-related courses—on planning, design and implementation, change, leadership, management, learning theories and their applications in design and development of learning and teaching strategies, assessment and professional development and organizational learning (60 hours)
- B2. A course of “action research, action research project and reflective practices” (20 hours)⁵¹

Like principals undertaking development associated with the Continuing Professional Development Framework, primary school curriculum leaders also received specialized training in action research, and used action research projects as a key developmental experience. This means that primary school curriculum leaders who undertake Hong Kong’s Certification for Principalship will already have been trained in action research and will have considerable instructional leadership experience.

Component A provides the Education Department Bureau with a platform to shape candidates’ understanding of curriculum reform policies, requirements and mandates. It also serves as an introduction to the Bureau’s support and resources for curriculum reform. Component B introduces candidates to theories and practice in curriculum leadership, to help them successfully implement school-based curriculum development.

The web-based delivery mode used for a course in the first three cohort programs was removed in 2006 due to negative feedback from participants, who felt it was not suited to leadership content or meaningful consultation.⁵²

Instructional leadership at the principal level varies between systems. So what?

A key lesson from these high-performing systems is that instructional leadership development requirements at the principal level are informed by the distributed leadership roles and responsibilities required for school improvement and curriculum reform. In these systems, responsibility for school improvement is collaborative and distributed: through career tracks, school improvement models and informal leadership processes, teacher leaders share responsibility for teacher professional development, strategic planning and curriculum improvement. This means that principals have to play a different kind of leadership role, supporting and facilitating these distributed structures.

It also means that aspiring principals tend to have experience in instructional and departmental leadership prior to undertaking a principal preparation program—and so distributed leadership has an impact on the design and delivery of leadership programs for aspiring principals in these systems.

Supporting the instructional leadership capacity of teacher leaders, heads of department and subject heads both contributes to the principalship pipeline and has a bearing on how principal preparation programs address instructional leadership.

Fundamentals of high-quality school leadership development programs

“Over time, countries are likely to reap the benefits in terms of school improvement and student achievement from the development of quality professional preparation programmes for their school principals.”⁵³

Leadership development programs in Ontario, Hong Kong and Singapore observe a fundamental principle: programs are designed to fit the system vision for education and leadership while providing a high level of integration with the teaching profession and schools (the organizations in which aspiring principals will ultimately work).

The way a system wants its teachers to act (i.e., as a learning profession), the kind of schools the system wants (i.e., professional learning organizations) and the system’s vision for how schools improve (i.e. steps and accountability) all have an impact on the leadership behaviors required of effective school principals—and therefore on the design of high-quality leadership development programs.

The best programs aim to prepare principals for the kinds of school the system aspires to have, are designed to prepare participants for and support them through meaningful action research projects that simulate the type of work they should do as principals and are situated in authentic school environments.

This chapter outlines the fundamental principles and key elements in high-quality leadership development programs, drawing on design and delivery lessons from high-performing systems. The intention is not to replicate the considerable existing body of work on this subject but to provide complementary detail, especially on the ways that programs create and leverage links to their education systems.

Intentional design: a fundamental rule of quality programs

The reason these leadership development programs are so good is that they engage emerging leaders in a process of development that is not separated from their daily work. Instead it emerges from the complex interplay of high-quality elements such as peer-group work and collaborative networks involved in the action research project.

The learning environments that are created in the program design reflect the complex and dynamic working world of school leaders. In this way, the leadership development programs in these systems are not simply “content events” but are part of an ongoing

process, because the learning activities include collaboration, networks, mentoring and engaging school communities in a new initiative (through action research).

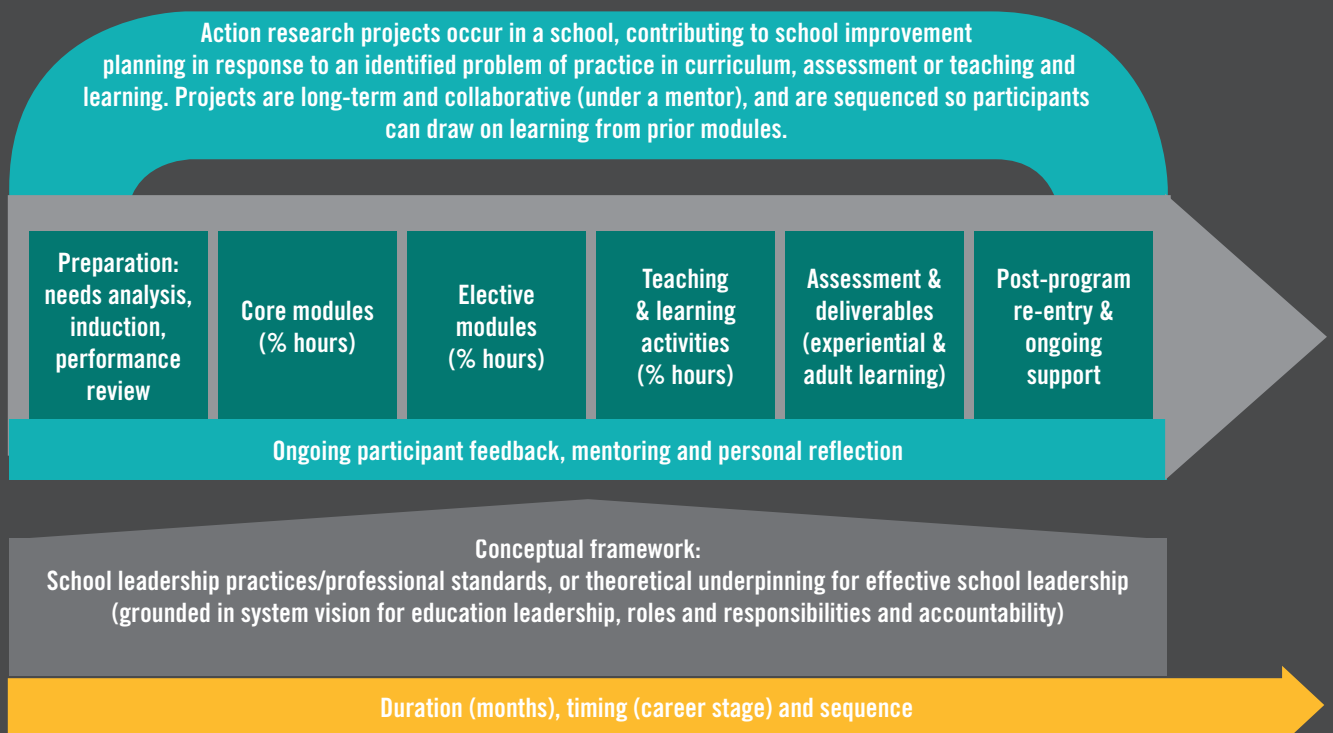
Leadership is defined beyond the individual. It is focused on collective and situated problem-solving, as the principal seeks to change cultural and behavioral norms at a school to improve student learning outcomes.⁵⁴

Figure 2, below, outlines the key elements of the design of these programs.

The key elements in program design and delivery in these high-performing systems are:

- Objectives;
- Conceptual frameworks;
- Duration, timing and sequencing;
- Participant preparation;
- Content: core and elective modules;
- Teaching and learning activities (i.e., action research projects and other activities);
- Assessment and deliverables; and
- Post-program transition.

Figure 6 Key Elements in Quality Leadership Development Programs



High-quality programs have these key elements to support effective leadership development. They need to be understood as a whole.

Assessment and deliverables reflect program content and delivery, which are all tied to the conceptual framework and objectives. Nothing should be designed in isolation. Similarly, effective action research should take place over time in a school setting and after participants undertake core learning modules that affect their chances of success, so that they can implement their learning during a school improvement inquiry. Sequencing is therefore a key consideration.

Objectives

“The [Leaders in Education program at Singapore’s National Institute of Education] is a milestone programme that prepares selected education officers for principalship in schools. The objectives of the LEP are aligned with the values and education philosophy of the national system. The programme aims to develop a principalship that is values-based, purposeful, innovative and forward-looking, anchored on strong people-leadership, strategic management skills, and an appreciation of how principals could work in a complex environment.”⁵⁵

In each of the high-performing systems, school leadership programs were developed in response to systems redefining what they wanted principals to do in the context of broader reforms: Singapore’s *Thinking Schools, Learning Nation* agenda, for instance, or Hong Kong’s transition to School-Based Management directly shaped the design of each system’s respective leadership development programs (Box 7).

This is not new: leadership programs have followed direction from system leaders for many years in many systems. But what is important is that the strategic direction from the systems focused on the specific steps that schools need to follow to improve, and therefore the behaviors required of effective school principals.

Singapore, for instance, introduced the School Excellence Model in 2000 to help schools operate in line with the *Thinking Schools, Learning Nation* vision for education; Ontario holds principals accountable for the goals set under School Improvement Planning for Student Achievement (SIPSA) requirements; while Hong Kong introduced the School Development and Accountability Framework (including school self-evaluation and external school review), which shapes principals’ leadership and management roles under School-based Management. The principal preparation programs in each of these systems were designed to address these respective school improvement processes and the roles and responsibilities that principals had in leading them.

But the core areas only provide the scaffold for program design: the actual content includes highly specific information about School-based Management, self-evaluation and

Box 7 How Did Hong Kong’s System Reforms Influence School Leadership Development?

*“Leadership plays a key role in a policy environment of school-based management aimed at school improvement and better student learning outcomes.”*⁵⁶

In Hong Kong, the Education Department Bureau undertook massive reforms starting in 1991 to help the transition to School-based Management. That approach required schools to be “professional learning communities” that would undergo continuous improvement through self-evaluation and external accountability reviews.⁵⁷ Similarly, teaching was to become a “learning profession” characterized by continuous professional development.⁵⁸

Hong Kong therefore needed a new cadre of principals. The ad hoc training programs of the 1980s and 1990s were no longer adequate to the demands. In the early 2000s, the Education Department Bureau therefore established the Continuing Professional Development Framework for principals, to develop the capacity of aspiring principals, new principals and serving principals to lead school and student improvement and teacher professional development under School-based Management.

This included developing the *Key Qualities of the Principalship in Hong Kong* (2000) to define and clarify the role of the principal (as seen in the opening quotation).

The six core areas of leadership for school and student improvement articulated in *Key Qualities* still provide the foundation for principal certification programs and professional development for principals in Hong Kong today. The Preparation for Principalship program, for instance, reflects these qualities as core modules.

external review requirements, Hong Kong’s curriculum reform contexts and the School Development and Accountability Framework (SDA), to name a few.

For more on this, see the Hong Kong case study in Part II.

Conceptual frameworks

Too few programs for school leaders connect the theoretical foundation of the program design and the proposed outcomes.⁵⁹ The leadership development programs in this report have a conceptual framework, with a theory for how the program will benefit schools and student learning.

A conceptual framework and theory of action should:

- Build on the evidence on effective leadership knowledge, skills and competencies in that system (especially if linked with system researchers and academics, as in the *Ontario Leadership Framework*);

- Articulate a connection between effective leadership practices at different levels of the system (in the ways that schools and districts or district school boards relate to each other and to the central ministry or government); and
- Shape the ways participants are assessed and give them a sense of responsibility for their own development.

The Ontario College of Teachers, for instance, uses the five leadership domains and the personal leadership resources in the *Ontario Leadership Framework* to provide a conceptual framework for the program. This framework is complemented by a “critical theoretical framework,” which is “the adoption of a critical pedagogical lens and an inquiry stance.”⁶⁰ Participants then demonstrate how they have developed this critical and pedagogical stance through formative and summative assessments. For more details, see the Ontario case study in Part II.

Duration, timing and sequencing

Many studies have shown that allowing participants sufficient time for job-embedded and personal growth is crucial for successful professional development.⁶¹ Duration is the overall span of the program, from the first component (induction, needs analysis or participant preparation) to the final assessment. Sequencing refers to the way the content and teaching and learning activities are structured.

Details about the duration and sequencing of programs (and program content) are included throughout this report. Although Singapore’s Leaders in Education program is unique in being a full-time, six-month program, all providers across these systems demonstrate a commitment to allocating sufficient time for aspiring leaders to immerse themselves, particularly through sustained action research projects. Part-time programs can also take place over a longer time span.

What is crucial is that the sequence of the modules makes sense in terms of the depth of experience and learning that are expected to take place (Figure 3, next page).

Participant preparation

Professional development programs are most effective when they respect the needs of the adult learner.⁶⁵ Adult participants benefit from giving input into their experience in the program as well as the pre-program and selection stages. This need can be accommodated in multiple ways.

So how do providers take participants’ prior learning and experiences into account?

Providers of school leadership development programs use different methods for assessing participants’ prior learning and experience to heighten the impact of the program. The

Figure 7 The effect of Sequencing on Teaching and Learning for School Leadership Development: Lessons from Ontario, Canada

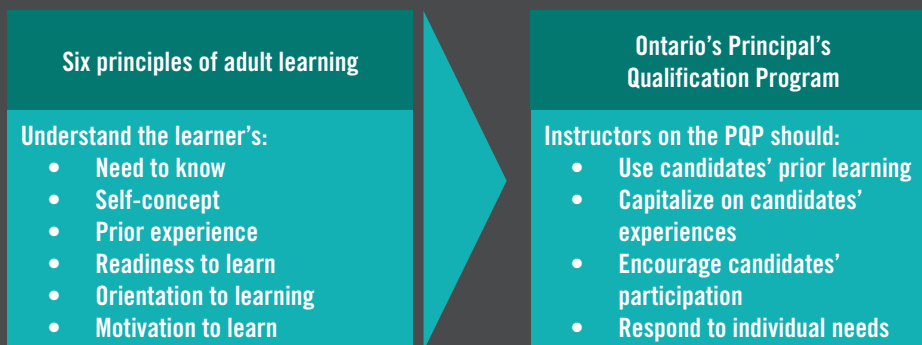


Box 8 What Is Adult Learning and Is it Really Relevant to Program Design?

Adults are at a stage of life and development very different from school students, and this fact demands attention to what approach works best for adult learners.⁶² They bring a more developed sense of self and purpose than children, both in terms of their approach to learning and their career and work goals. This has implications for how they engage in developmental opportunities.

What does this look like in an actual program?

The Ontario College of Teachers encourages instructors of the Principal's Qualification Program to "honor the principles of adult learning."⁶³ This means that all providers should "use strategies that are relevant, meaningful and practical in providing candidates with learning experiences."⁶⁴



Sources: Knowles et al (2015); Ontario College of Teachers (2016).

high-performing systems profiled here use two approaches to deciding that: selection and aspiration.

Selection

Singapore's selection approach to school leadership development is markedly different from the aspiration approach of most other systems. Singapore's Ministry of Education selects aspiring leaders to undertake leadership development programs through sustained talent management and identification. The Ministry uses data from its educator evaluation system, the Enhanced Performance Management System and Current Estimated Potential protocol (see Singapore case study in Part II) to shape its selection decisions. These data help provide a leadership development experience that is highly responsive to individual participants' own needs. The information and feedback from mentors give the institute a clear idea of each participant's motivations, learning styles, prior experiences and personal awareness.

Aspiration

Most systems do not have Singapore's talent management and leadership track structures. Instead, teacher leaders apply for and fund their own qualification programs. Once qualified, aspiring principals are not guaranteed a job but return to their schools and wait for a position to open. This is known as the "aspiration" approach. It does not mean these systems cannot provide development programs that reflect the principles of adult learning or respect participants' individual needs.

In Hong Kong, for instance, aspiring principals self-nominate to undertake the Certification for Principalship. To ensure their learning is tailored to individual needs, the Education Department Bureau stipulates that the first requirement is to complete a Needs Analysis Program at one of the system's licensed providers (see Hong Kong case study in Part II).

The Needs Analysis Program at the Hong Kong Baptist University, for instance, provides aspiring principals with an evaluation of their strengths and weaknesses going into the program so that they can a) assess their own suitability for the principalship, and b) design a personal development learning plan towards "higher leadership competence."⁶⁶ This process can be a proxy for longer-term performance management and personal growth plans.

Content: core and elective modules

*"While the interest of most leadership programs is directed at the content," the [Leaders in Education program] emphasizes delivery" as the focus of learning. The content is there as a learning support, but the delivery architecture is what sets it apart from other programs. Action learning is a central concept in the delivery of learning."*⁶⁷

Box 9 Providers Must Respect the Principles of Adult Learning.

Providers wanting to ensure they are delivering high-quality education that honors the principles of adult learning can assess themselves against the following list:

- Detailed understanding of the participants' existing knowledge and expertise (through a needs analysis, understanding the participants' prior roles and responsibilities);
- Processes in place to give the participants input in creating their learning experiences (e.g., personalization by selecting elective courses, choosing a project topic, taking part in group work or peer collaboration, setting personal development plans with instructors or mentors);
- A range of learning environments (including group and team work and learning from peers);
- Multiple teaching and learning methods that involve experiential learning (i.e., action research projects, mentoring and shadowing programs);
- School-based learning (i.e., mentoring by an in-service principal, shadowing);
- Access to experts and outstanding instructors across a range of stakeholder institutions, (professional organizations, system leaders, etc.);
- Depth and breadth of available time (intensive workshops for deep and personal learning, and breadth of duration for long-term activities, projects and portfolio compilation).

Not all providers would necessarily agree with Singapore's emphasis on delivery skills over content. However, the fundamental principle holds that delivery and content are linked, and that effective leadership development takes place when action research projects are designed as a core teaching and learning activity for making content meaningful. As noted earlier, content in the programs for aspiring principals in high-performing systems varies because they have been designed for specific system objectives.

Singapore

All modules in Singapore's Leaders in Education program are mandatory. Unlike the Management and Leadership in Schools program for teacher leaders, aspiring principals are not offered electives. This is in part to develop their collective professional identity and also to co-create a common core of knowledge for the nation's school leaders.

Core modules are delivered in highly interactive classroom settings. Key modules are covered before the action research project so participants can practice skills and capacities developed through the modules. These core modules are a "learning support" for the action research project and syndicate-based learning: they cover foundational knowledge

and skills that participants then reflect on during engaged, participatory teaching and learning activities. In 2016, the core modules included:

- School leadership, vision and culture;
- Educational leadership through “complexity lenses”;
- Contemporary strategic management;
- Human capital development;
- Design thinking: innovation and values;
- Valuing and developing people;
- Values and ethics for school leaders;
- Leading curriculum and instructional change;
- Evaluation and assessment;
- Use of Information and Communication Technology in enhancing teaching and learning; and
- Network leadership.⁶⁸

The main aim of these modules is to “provide a platform for bringing in new ideas to spark critical thinking and professional dialogue.” These modules reflect principals’ roles and responsibilities as CEOs of professional learning organizations: principals in Singapore are responsible for seeing whole organizational improvement, in collaboration with teacher leaders who oversee it at the departmental level.

Competencies, standards and frameworks: an opportunity and a warning

Ontario and Hong Kong have aspiring principal programs supported by the core competencies identified in each system’s leadership framework, the *Ontario Leadership Framework* (2013) and *Hong Kong’s Key Qualities of the Principalship* (2000).⁷⁰ Since 2013, the Chinese Ministry of Education has also provided a Professional Standards for Compulsory Education Principals list (and in 2015 released the Standards for Senior School Principals) to guide leadership development, including training and programs. The national Ministry of Education benchmarked these standards off examples from Mandarin-, Cantonese- and English-language systems, including Hong Kong, Taiwan, England, the United States and Australia.

The standards share emphases on: strategic planning and setting direction for the school; leading teacher professional development and growth; leading instructional, curriculum and school improvement; accountability and quality assurance in schools; organizational management and improvement; and building relationships with the broader school community.

Figure 8 The Standards and Leadership Frameworks that Organize Program Content in High-Performing Systems.

Ontario: Five leadership domains	Hong Kong: Six core areas of leadership	Shanghai: Professional Standards for Compulsory Education Principles (MOE 2013)
<ol style="list-style-type: none"> 1. Setting direction 2. Building relationships & capacity 3. Developing the organization to support desired practices 4. Improving the instructional program 5. Securing accountability 	<ol style="list-style-type: none"> 1. Strategic direction & policy environment 2. Learning, teaching & curriculum 3. Teacher professional growth & development 4. Staff & resource management 5. Quality assurance & accountability 6. External communication & connection to the outside world 	<ol style="list-style-type: none"> 1. Setting the school development plan 2. Cultivating a nurturing school environment 3. Leading curriculum instruction & school improvement 4. Leading teacher professional development 5. Optimizing organizational management 6. Adjusting to external contexts

Source: Adapted from the Ontario Leadership Framework (2013); the Key Qualities of the Principals in Hong Kong (2000); and the Chinese Professional Standards for Compulsory Education Principles (private translation, 2013).⁷¹

Providers in each system use these guiding competencies and standards to develop programs that satisfy the system needs and expectations. The advantages to this approach are that standards and frameworks can:

- Hold the evidence on what effective leadership in that system looks like;
- Aid quality assurance across providers;
- Ensure that system objectives are embedded in program content; and
- Enable providers to tailor content for the diverse contexts in which school leaders will work; e.g., in Catholic or rural schools.

While frameworks are one component of interrelated and intentional design, they are not the sole or even the main content. In Ontario and Hong Kong, content under the standards addresses each system’s specific processes.

Under Securing Accountability, for instance, aspiring principals in Ontario explore the province’s School Improvement Planning for Student Achievement (SIPSA) processes, including working with district school boards and the Ministry to ensure coherent and ambitious goals for student learning, tying teacher professional development to SIPSA goals and fostering shared accountability and distributed leadership for school improvement.

In Hong Kong, aspiring principals taking the Quality Assurance and Accountability module explore system-specific processes and reporting structures, including the Education Department Bureau’s School Development and Accountability Framework, which sees principals accountable for a school improvement cycle similar to Ontario’s, as well as the specific requirements of Hong Kong’s School-based Management structure.

Teaching and learning activities

These programs reflect principles of adult learning and support the objectives, conceptual framework, content, and assessment of the overall design.

All programs profiled in this report share a commitment to blended learning: online or digital material and multiple face-to-face teaching and learning activities. In 2016, the education consulting firm Carrington Crisp described blended learning as a newer phenomenon in MBAs, but it is a given in most school leadership development programs, including those in high-performing systems.⁷²

The programs also share a commitment to multiple teaching and learning activities to support effective professional development. Programs in Ontario, Singapore and Hong Kong—and indeed school leadership development programs generally—offer a range of teaching and learning activities in face-to-face settings and private learning, including:

- Talks or expert presentations;
- Workshops and seminars;
- Small-group work and tutorials;
- Private study and personal reflection;
- Case study analysis; and
- Mentoring and coaching.

This is not new. Reports on school leadership development abound with calls for high-quality mentoring, for instance, or expert faculty.

Action research projects

“The project is expected to help the school to improve in leadership and management practices that lead to student learning, and is meant to be a profound learning experience for the participant.”⁷³

David Ng, National Institute of Education, Singapore (2015)

This report does not challenge or replicate what is known but highlights the ways that four high-performing systems provide high-quality programs through program design and delivery. While these programs offer a range of teaching and learning activities, it is the high-quality action research projects that distinguish them from others in education and other sectors around the world. The delivery architecture of action research projects provides the crucible for effective leadership development.

Action research is a widely-used form of professional development for teachers and school leaders. It is a form of collaborative situated learning—learning in schools, about

schools—that is of immediate relevance to improving schools, teaching and learning practices.⁷⁴

Programs for aspiring principals in Ontario, Hong Kong and Singapore use action research projects to bring the elements of program design and effective adult learning—such as mentoring and professional networks, collaborative learning, job-embedded development, experiential leadership learning, and school improvement-focused design—into a meaningful development process. In Shanghai, it is conducted on a daily basis in schools through the lesson and research groups, as explained below.

Action research is not simply collegial problem-solving or job-embedded development. It goes beyond shadowing or an isolated or theoretical school improvement innovation.⁷⁵ These projects all obey fundamental criteria:⁷⁶

- They are **collaborative and participatory**, with the participant leading but in dialogue with the school principal and leadership team, teachers, and possibly parents and non-academic staff.
- Participants take an **experiential leadership role in identifying a specific problem** of practice of immediate concern to teachers in the host school based on evidence and data—i.e., a specific problem in curriculum implementation based on student learning data, interviews with teachers and assessment results.
- Projects are **cyclical**, involving planning, acting or implementing, observing and monitoring, and reflecting and evaluating, and must demonstrate a real contribution to school goals.
- Projects are **formative**, in that the plan and strategies for improving the situation may change in response to **feedback and data** that the project leader has gathered and analysed through implementation and monitoring.
- Projects are **embedded and real**, attempting to change teaching and learning practices to support the school’s actual improvement goals and priorities for student learning.
- An **experienced principal mentor**—typically the principal in the host school—oversees the projects and can help the participants frame a problem of practice and liaise with the school community. The mentor has a professional stake in the success of the project (being accountable for school improvement goals).

These principles enmesh leadership development and change management in the complex organizational and system context in which they will work as principals after the program.⁷⁷

Box 10 A New School Setting for the Action Research Project Is a Crucial Leadership Challenge

Pak Tee Ng is a chief architect of Singapore’s Leaders in Education program for aspiring principals, and is Head of Policy and Leadership Studies at the National Institute of Education. Ng explains the importance of conducting action research projects—the Creative Action Projects—in school settings that are new to the program participant:

Leaders in Education participants, he says, “have to exercise their leadership in strategically and systematically addressing change management issues in an unfamiliar school with no comforting sense of certainty. Moreover, the [Leaders in Education] participants have no rank or authority within the school. They should be able to work with the incumbent principal, vice principal, and teachers of their attachment school in promoting a vision of the school (i.e., 10-15 years into the future) and implementing change as part of that vision. The catch is that the [Creative Action Project] cannot be merely a theoretical exercise but must truly add value to the attachment school. Otherwise, being busy people, teachers will be unwilling to collaborate on the project to be implemented in the first place. With many variables and uncertainties, the [Creative Action Project] helps the participants to develop the adaptability and flexibility to deal with complexity.”⁷⁸

Source: Pak Tee Ng (2013)

Teachers and school leaders in the host schools are busy, critical professionals, and will not engage with the participants’ projects unless they have been convinced that the action research project is of real value to their own teaching and learning priorities and to the school’s improvement goals.

Each case has a real and significant outcome in terms of the aspiring principal’s impact on the host school: the projects are collaborative exercises in seeking a specific improvement in a real problem of practice for student learning in that school. Participants then lead a team in planning, implementing and evaluating a strategy for bringing that improvement to reality.

Action research projects can inform principal selection and appointment decisions. As seen in the Hong Kong case study, aspiring principals can use the outcomes of their action research projects to demonstrate leadership capacity as they seek promotion to vice principal and principal positions.

Singapore, Hong Kong and Ontario have all designed school-based action research projects that require an aspiring principal to lead a real collaborative team in changing cultural and behavioral practices. Further, the projects occur over time and are sequenced so participants can implement learning from core modules. Below is a brief summary of the action research projects in each system. (See the case studies in Part II for more detail.)

Ontario: Leadership practicum

In Ontario, serving principals are held accountable for goals identified in the annual school improvement plan. This is a core function of their job. A major project in the Principal's Qualification Program is therefore a school-based leadership practicum requiring the participant to lead a collaborative inquiry project that contributes to that school's improvement goals.

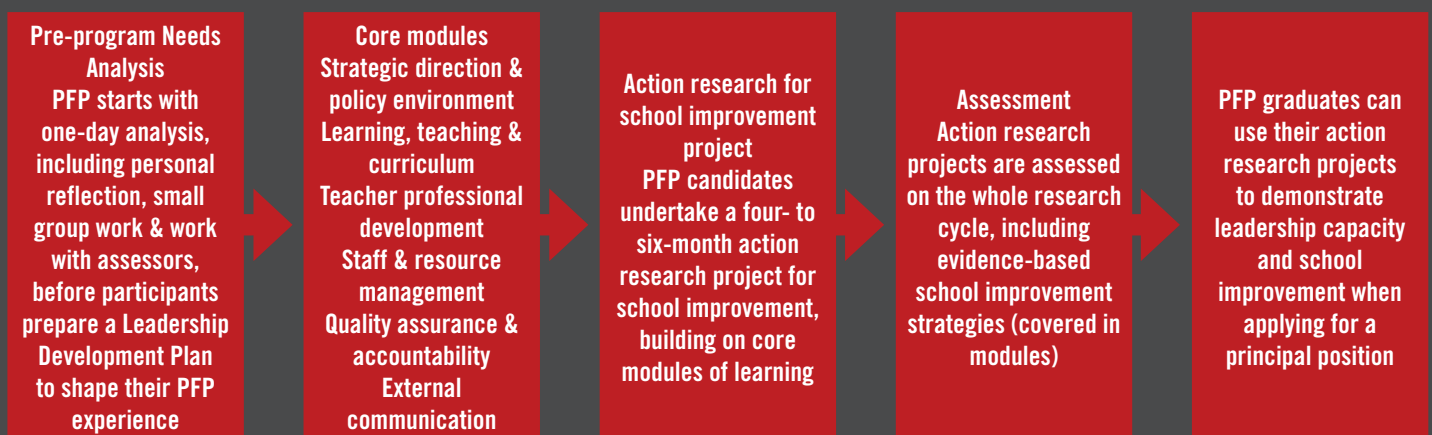
The leadership practicum builds on core program content and is assessed on participants' ability to demonstrate a contribution to the school improvement plan. Participants are mentored through the practicum by a fully qualified, experienced practicing principal.

Hong Kong: Action research project for school improvement

In Hong Kong, action learning is one of three modes of continuing professional development that all aspiring, new and serving principals must complete to satisfy their continuing professional development requirements. Participants in the Centre for Educational Leadership's Preparation for Principalship program, for instance, implement a school improvement strategy over a four- to six-month period. During this project, candidates enact theories of action research covered in core content, aligned with Education Department Bureau guidelines.

Rita Yeung, now principal at a Grade 1 secondary school in Hong Kong, said she found that her action research project helped not only develop but also demonstrate her leadership capacity to her colleagues and principal, helping her secure a promotion to vice principal. Action research projects and theories are also key components for the development of Primary School Curriculum Leaders in Hong Kong (as seen in Chapter 2 above).

Figure 9 Sequencing of Action Research Projects in a Preparation for Principalship (PFP) Program at the Center for Educational Leadership, Hong Kong University



Source: adapted from Center for Educational Leadership, Hong Kong University (2016)⁷⁹

This is discussed further in the Hong Kong case study in Part II.

Singapore: Creative Action Plan for aspiring principals and Curriculum Project for teacher leaders

In Singapore, teacher leaders (called ‘key personnel’) are responsible for strategic planning and curriculum improvement at the departmental level: their action research projects therefore concentrate on curriculum reform.

School principals, on the other hand, lead school improvement processes as systems thinkers, taking into account the whole school as a complex and dynamic organization. The National Institute of Education therefore has designed an action learning approach—the Creative Action Project—for aspiring principals that concentrates on school improvement at the whole-organizational level (which may include curriculum) in a new school setting.

Box 11 What Does an Action Research Project Look Like?

Aspiring principals in Singapore undertake a Creative Action Project at a host school, where they are attached for the six-month duration of the program. This school is not only different from their current one but is typically also a different type. That is, vice principals from a primary school may be placed in a secondary school and vice versa.⁸⁰

While on attachment at this new school, participants work with the principal, their mentor for the project, on a Creative Action Project, an action research project that is a major component of the Leaders in Education program. The Creative Action Project is an exercise in “futuring” and change management, aiming to challenge Leaders in Education participants’ current beliefs and assumptions about education and school leadership.

Aspiring principals must imagine what their attachment school might look like in 10 to 15 years (in curriculum, pedagogy and school structure) in Singapore’s economic and political context.⁸¹ They consider questions about future challenges and opportunities for education : what jobs will students today find in this future? How can schools prepare students for jobs that do not yet exist? What should curriculum and instruction look like?

Program participants then work with the principal and Creative Action Plan groups to implement one aspect of this future (improved) vision. They are encouraged to focus on curriculum, pedagogy and assessment, leading to improvements that are scalable, sustainable and meaningful in that school’s context. Aspiring principals use syndicate (small discussion) groups to reflect on ideas and experiences from their action research projects.

Source: Pak Tee Ng (2015)

Shanghai

In Shanghai, action research is part of the daily practice of being a teacher. Schools operate teaching and research units (also known as lesson and research groups) by discipline or subject. These units provide a platform for professional development for both new and experienced teachers. They meet regularly with their unit to discuss issues such as class scheduling; they conduct joint lesson planning, talk about student learning and problems in curriculum implementation, set assignments and tests, and develop younger teachers' capacity with the help of senior mentors.⁸²

The teaching and research unit structure at the school and district level in Shanghai can provide a pathway for teachers to establish their expertise in instruction and curriculum, and to progress towards the principalship. For instance, senior-grade teachers can serve as deputy directors of a district teaching and research unit, observing classrooms and advocating good teaching practices across the district, demonstrating exemplary lessons and publishing research.⁸³ This experience can provide candidates with the evidence of relevant teaching and learning activities required for promotion.

Why action research projects are so effective: developing a leader identity

These action research projects and the mentoring relationships that support them provide an environment for developing a leader identity. This goes beyond knowledge, skills and abilities and leadership behaviors to include what it means and feels like to be a leader.⁸⁴

This is not trivial. A strong leader identity underpins the ability to take up a leadership role with confidence, integrity and authenticity, which is important in programs that also grow other leaders in the organization. Identity development can be enhanced when emerging leaders have the chance to try out their leader identity—e.g., through leading an action research project in a new school—and have a support network of peers and a mentor with whom to share personal and challenging aspects of the experience.⁸⁵

How do the action research projects provide a context for identity development? They provide program participants with a situation in which they must collaborate with others and ultimately implement an innovative, school-based initiative. The participants are in the leaders' seat: while they do not yet have the formal school leader title, they are leading this initiative, engaging with others as the leader. It is a real and meaningful way to be a leader while also having the freedom to experiment and practice before the supports of the development program are removed.

Identity work, however, is not just about the doing. Plenty of teaching and learning activities can engage experiential learning methods. While they are “doing,” participants can talk about their experiences with trusted and experienced others: their program colleagues, who are engaged in a change management project, and (crucially) an expert mentor. This provides relationships within which the participant can talk about personal

issues and challenges. It is the trust, the duration of the relationship and the fact that the mentor knows the role and its challenges intimately that help embed a leader identity.

Choice of mentor and the matching of mentor and mentee is an important aspect of this developmental relationship. In the four high-performing systems examined in this report, mentors and mentoring programs feature prominently. The mentors are experienced, expert principals who are available to talk with participants and work through issues as they are leading the action research project.

Identity work is very personally and emotionally charged. It is not contained in a core module or in one teaching and learning activity. It requires a developmental “stretch task,” in which the participants lead something of their own with the support of people around them.

The idea that leadership development programs provide an environment for identity development is neither new nor exclusive to education. Academics at INSEAD, one of the world’s top business schools, suggest that emerging leaders seek a safe place to do identity work.⁸⁶ Here the point is slightly different. Petriglieri and Petriglieri argue that as organizations become more turbulent for employees (with a faster pace of change and increased demands), they can use external program providers as somewhere to go outside the workplace to do identity work. In this view, identity work feels too personal to risk doing on the job. In the context of the school leadership development programs profiled here, peer group and quality mentoring and other support provide this psychologically safe space for the same identity work.

Self-knowledge and awareness are central in developing an identity as a leader.⁸⁷ The identity work processes require a person to think about who they are, where they have come from and how they make sense of what it means to be a leader. Programs that make time and space for personal development therefore create opportunities for identity work as part of leadership development.

What does effective identity work involve?

- Exploring personal and professional narratives in terms of one’s experience of leadership and beliefs and attitudes toward leaders and leadership, power and authority;
- Sharing personal insights and reflecting on one’s actions with peers and with mentors and giving and receiving feedback on interpersonal communications and behavior in peer groups;
- Embedding personal awareness and understanding through individual reflective thinking and journaling; and
- Taking up a leadership role to lead a new initiative to change culture.

Program providers need to consider ways to design the program to best support identity work as an aspect of leadership development. Some programs provide a “deep dive” experience in terms of personal awareness, engaging participants in intensive experiential learning workshops in small group settings, supported by a coaching relationship that continues beyond the end of the workshop. However, identity development does not always need this intense approach. Reflection, sharing with peers and receiving feedback, collaborative group work, journaling and mentoring all support identity work.⁸⁸

Assessment and key deliverables

Assessment and key deliverables are tied to the teaching and learning activities and objectives of the program. These programs use mixed methods for formative and collective assessment, including:

- Peer assessment (peer-to-peer feedback or “360° feedback”);
- Self-assessment (personal reflection, personal development planning); and

Box 12 Key Deliverables and Assessments in Singapore’s Leaders in Education Program

- **Creative Action Project report**— participants submit a report on their action research project and reflect in their journals on their experience, particularly on the challenges they faced in both the pilot and in scaling up the project. They should demonstrate how they leveraged the modules (specifically “Design Thinking: innovation and values”) for their project.
- **Learning journal**—participants submit a journal that reflects their beliefs, values and thoughts about leadership, management, teaching and learning in the context of the Leaders in Education program, including the Creative Action Project, intentional visits, syndicate discussions and courses. Each journal contains six reflections of around 1,000 words each, including one on the 5R5M framework, and an executive summary of around 1,500 words. The participants receive feedback from their syndicate (discussion group) leader throughout.
- **Course assignments**—participants submit a short assignment for each core module.
- **International visit report**—each syndicate submits a group report on the international visit, which may be disseminated among other educators in Singapore.
- **Management Dialogue Session reports**—each syndicate submits a group report on the Management Dialogue Sessions with key senior officers from the Ministry of Education, drawing together key lessons and perspectives on national imperatives, education policymaking and values, education philosophy and school leadership in Singapore.

Source: Leaders in Education Handbook for Participants (2016)

- Instructor evaluation: in written assignments (such as module essays, case study analyses, policy opinion pieces or recommendations), oral assessments (presentations), group assignments and portfolios (such as a personal development toolkit including reflections, frameworks, policy guidelines, planning tools, proposals and vision statements).⁸⁹

Participants are frequently involved in setting their own assessment criteria or expectations for success.⁹⁰ Assessment can be used to support and corroborate the conceptual framework of the program. For instance, in Ontario, aspiring principals are assessed through formative and collective means on their understanding and application of the *Ontario Leadership Framework* and the province's Professional and Ethical Standards, and on whether they have met the program expectations.⁹¹

Programs can tailor assessment criteria closely to system roles and responsibilities and accountability requirements for principals, such as school improvement planning or leadership frameworks and competencies. Guidelines for the Principal's Qualification Program in Ontario, for instance, recommend that providers include a performance assessment in which the participant develops a personal plan for professional growth, including support for student learning and staff capacity-building within a school improvement plan (as will be required on the job).⁹²

Assessment of action research projects

The aspiring principal programs in Hong Kong, Singapore and Ontario all include a major action research project. These projects are assessed in various ways, but effective assessment addresses the full spectrum of the action research cycle—including critical self-reflection and the identification of a problem of practice, development of strategies, data analysis, implementation and monitoring of the cycle.

Action research project assessment should consider not only the actions undertaken but the data selection and analysis that led to the identification of—and strategies for improving—the specific problem of practice.⁹³

Post-program

Effective leadership development programs help participants make a successful transition into a new leadership role. Even the best programs, however, can struggle to manage this transition.

In the corporate sector, it is called “re-entry shock”: when participants return to work but their experiences in the workplace and their organization's expectations and reality around their potential to grow do not match their sense of development or learning from the program.

Box 13 Assessing the Leadership Practicum at Ontario's Institute for Studies in Education

Principals in Ontario are accountable for the goals set out in the province's School Improvement Plan for Student Achievement (SIPSA). The Leadership Practicum on the Principal's Qualification Program at the Institute for Studies in Education (University of Toronto) is a school-based action research project designed to develop aspiring principals' capacity to lead a collaborative inquiry that supports SIPSA and assesses their ability to do so.

Leadership Practicum assessment is designed to support both SIPSA and the *Ontario Leadership Framework*. Participants at the Ontario Institute of Studies in Education, for instance, are assessed on whether they have:

- Ensured that the leadership practicum clearly supports the school improvement plan;
- Established a practicum focus that supports improvement of teaching and learning in the school;
- Assumed a leadership role through the practicum that includes working with staff and/or parents;
- Monitored and/or measured the impact of the practicum on related outcomes of the school plan;
- Analyzed and taken into account particular needs, challenges, plans and priorities of the school context; and
- Identified a minimum of three specific descriptors from the Practices and three from the Competencies in the *Ontario Leadership Framework*, as foci for the development of personal and professional growth.

The leadership practicum and assessment are therefore highly relevant to principals' roles and responsibilities. It is an experiential test run of the principalship in a real school setting over time with the support of an expert mentor, and is supported by adult learning and action research principles.

Source: Ontario Institute for Studies in Education, Leadership Practicum Guide and interview with faculty, Ontario 19 April 2016.

This mismatch of expectations can severely curtail the program’s potential benefit and even lead to the participant’s departure from the organization. It is a form of professional culture shock and is a serious problem for leadership development programs that aim to change behaviors.

Increased attention to the experiences of new principals and support for them—such as in Hong Kong’s Continuing Professional Development Framework—show commitment to taking seriously the difficulties of early years in the role. (See the Hong Kong case study in Part II for details.) Similarly, the Ontario Ministry of Education funds District School Boards through the Board Leadership Development Strategy to provide new principals with a mentor in their first two years on the job.

None of these systems relies solely on formal programs to bear the burden of professional leadership development. The programs are only one component of a broader culture of continuous professional development for teachers and school leaders: they are part of a process, not a “content event.” That fact models school leaders’ ongoing development and duties, reducing the risk of re-entry shock.

Further, the action research projects that are a significant portion of the teaching and learning activities take place in the schools, the same kind of organizations where participants will work. They follow the procedures for school improvement planning and collaborative instructional leadership that will characterize the principals’ post-program roles, further mitigating the risk. Aspiring principals can use these action research projects to demonstrate their leadership development when applying for any role.

Box 14 Accommodating Complexity in School Leadership Development: Lessons from Singapore

“Increasingly, school leaders need to have the skill and discipline to continuously interpret the future into strategic plans, and then use their executive skills to accomplish the plans in evolving circumstances. This is highly complex. School leaders have to navigate non-linear change paths: navigating this kind of change is a critical competence for 21st century change-leaders in school systems.”⁹⁵

The action research project complements the Leaders in Education program’s broader emphasis on complexity theory in school leadership development. Researchers and practitioners have argued that there is a “deep complementarity” between action research and complexity theory.⁹⁶ Some argue that this is what makes action research so effective. For instance, it has been suggested that action research:

- Accepts that systems are unpredictable, open and non-linear;
- Resonates with issues of adaptation;
- Celebrates the interaction of participants;
- Requires both feedback and feed-forward;

- Is reflective;
- Shows an interest in exceptions or outliers;
- Is not concerned with controlling variables; and
- Accepts that the systems where it takes place are complex and dynamic.⁹⁷

The architects of Singapore’s leadership development programs take complementarity seriously, not just in action research but in their whole design and delivery of programs for teacher leaders and aspiring principals. As Professor Pak Tee Ng notes:

“The [Creative Action Project] experience offers a deeper appreciation of the dynamics of school situations. The experience also suggests to the participants that there is no fixed recipe for leadership actions, but only principles for finding them. As the Leaders in Education participants embrace such traits, the educational system benefits from the development of new school leaders who are now more capable of handling the increasing complexities associated with school leadership who can thrive in times of uncertainty.”⁹⁸

The National Institute of Education has therefore taken complexity theory as a core principle in its philosophy for leadership development and program design and delivery. David Ng is a senior faculty leader at the NIE and a chief architect of the institute’s milestone leadership development programs. He is a key advocate of Singapore’s move “beyond competency-based training” toward programs that accommodate complexity theory.⁹⁹ He explains how this design is different: “Many school leadership programs are set and delivered in specific modules or workshops to achieve a pre-determined set of competencies, knowledge, and skills...these programs are driven by the faculty member and the prescribed content.”¹⁰⁰

In the Leaders in Education Program, by contrast, the emphasis is on delivery rather than content: while core modules exist, greater emphasis is placed on collaborative learning settings, including the action research project—the Creative Action Project—and the discussion groups of five to six members, or syndicates with a leader, provide the core components of the program. The National Institute of Education’s program for aspiring leaders offers an 18-hour module on complexity theory. But more importantly, the principles of the theory are embedded into the program design and into teaching and learning activities beyond content.

In other words, the National Institute of Education uses complexity theory to guide program design: “By designing the LEP with reference to complexity theory, it is the aim of the LEP to move towards a curriculum that is more dynamic and emergent, relational, autocatalytic, self-organized, open, existentially realised by the participants, connected, and recursive, compared to the traditional didactic model.”¹⁰¹ In short, it models schools as complex professional learning environments.

So what are the quality hallmarks of complexity-informed program design and delivery?

- **Leadership development is a process, not a product:** the emphasis is not on objective and course-driven learning but on learning that has emerged and is process-driven.¹⁰²
- **Leadership development is more than the sum of its parts:** What participants learn is determined by “deep interactions and the active participation in the rich processes such as action learning, dialogue, reflection, external perspectives,” and is not simply a summary of “content” that was delivered.¹⁰³
- **Knowledge is co-constructed and shared, not pre-determined:** The LEP places self-organizing interactions between participants, staff and partners at the center of the program.¹⁰⁴ Instructors are not experts there to transmit predetermined knowledge but are facilitators, co-learning and co-creators of meaning, enabling participants to connect new knowledge to existing knowledge. Participants, in turn, have to “exercise autonomy, responsibility, ownership, self-direction and reflection.”¹⁰⁵
- **Delivery, not content, is the focus of effective leadership learning:** Content is a “learning support” for delivery, such as action research projects and collaborative groups.¹⁰⁶
- **Leadership development is collaborative:** Syndicates—groups of 6 to 8 participants with an instructor—are a key component of the program, because they allow for divergent and explorative thinking and conversation.
- **Leadership development is networked:** Partnerships with other schools, business organizations and educational institutions expose participants to leadership practices and ideas in other contexts.¹⁰⁷

Conclusion

Part I has illustrated how fundamental aspects of the design of leadership development programs in high-performing systems greatly increase their effectiveness. Analysis of general trends in leadership development across multiple industries highlighted recurring problems, such as programs that are too content-heavy, programs that do not allow for individualized leadership development, and programs that are disconnected from the actual content and type of work participants will face on the job.

School leadership development programs have been able to overcome many of these problems, however. In doing so, they are at the cutting edge of broader leadership development trends. This has been achieved by:

- Tailoring school leadership programs to the current reforms and specific types of leadership needed in each country's education system; and
- Using schools and the broader education system as apprenticeship-style teaching and learning opportunities for the program.

This is achieved by taking into account key goals of each education system:

- How the system wants teachers to act (i.e., as a learning professional);
- How the system wants schools to act (i.e., as professional learning organizations responsible for continuous self-improvement);
- How the system supports school improvement (i.e., the steps taken to make schools get better, including a school improvement model and accountability requirements); and
- The distributed leadership roles and responsibilities within schools, including teacher leaders, vice principals and principals (particularly instructional leaders).

Programs are then designed to leverage these features of education systems. Action research projects are by far the most important aspect of these programs, with key features emphasized in different ways across systems.

How to use Part II

The findings in Part I are based on the detailed case studies of school leadership development programs in Part II. It is hoped that those looking to improve leadership development in their own education systems can use the detail in Part II to better understand the analysis in Part I. Moreover, the Part II detail should help those looking to make practical on-the-ground improvements in leadership development in their own systems.

The case studies highlight the ways each system's context shaped the design and objectives of its leadership development program. They discuss the roles and responsibilities of principals in these systems, and how program providers and designers took system objectives and roles and responsibilities into account when creating teaching and learning activities that also build on adult learning principles for effective leadership development.

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Notes

1. Branch, Hanushek, & Rivkin 2013.
2. OECD 2014, 67.
3. Volz-Peacock, Carson, & Marquardt 2016; Leonard and Lang 2010.
4. Knowles, Holton, & Swanson 2015.
5. Leithwood et al. 2004.
6. Update after 2015 PISA data released.
7. Jensen et al. 2012, 2.
8. Shanghai is the exception in this report in that it does not currently have a single, mandatory pre-service program for aspiring principals but instead requires principals to complete professional development hours.
9. Hitchcock & Hughes 1995, 319.
10. Ontario Ministry of Education 2013, 8.
11. Ontario College of Teachers 2016.
12. Ontario College of Teachers 2016, 1.
13. Ontario College of Teachers 2016, 7.
14. Walker et al. 2000.
15. National Institute of Education, Singapore 2016.
16. National Institute of Education, Singapore 2013, 7.
17. National Institute of Education, Singapore 2013, 1.
18. Zhang, Ding, & Xu 2016.
19. Jensen et al. 2016.
20. Jensen et al. 2016.
21. Gurdjian, Halbeisen, & Lane 2014.
22. Gurdjian, Halbeisen, & Lane 2014.
23. Petrie 2014a; Gurdjian, Halbeisen, & Lane 2014.
24. “CarringtonCrisp - Tomorrow’s MBA” 2016.
25. Quinn & Quinn 2016; Leonard and Lang 2010; Volz-Peacock, Carson, and Marquardt 2016.
26. “About Wial” 2016.
27. Volz-Peacock, Carson, & Marquardt 2016, 321.
28. Leonard & Lang 2010.

29. Leonard & Lang 2010, 8–9.
30. Petrie 2014a.
31. Gurdjian, Halbeisen, & Lane 2014.
32. Walker et al. 2000.
33. Quinn & Quinn 2016.
34. Quinn & Quinn 2016.
35. Jensen et al. 2016.
36. National Institute of Education, Singapore 2016, 6.
37. National Institute of Education, Singapore 2016, 7.
38. National Institute of Education, Singapore 2016, 8.
39. Tan Heng Kiat, Heng, & Ratnam-Lim 2016; MacPherson & Brooker 2000.
40. Marsh and Lee 2014, 177.
41. Hallinger & Moonsung 2012.
42. Armstrong 2014, 16.
43. Ontario College of Teachers 2016, 8–23.
44. Cheng, 2009, 69–70.
45. Marsh & Lee 2014, 177.
46. Marsh & Lee 2014, 177.
47. Marsh & Lee 2014, 176.
48. Hong Kong Baptist University 2016, 3.
49. Jensen et al. 2012, 37.
50. Education Bureau Hong Kong 2016, 33–34.
51. Marsh & Lee 2014, 180.
52. Marsh & Lee 2014, 183.
53. OECD 2014, 80.
54. This approach is at the cutting edge of the predicted future trends in leadership development articulated by Nick Petrie at the Center for Creative Leadership (2014).Petrie 2014a.
55. National Institute of Education 2016, 5.
56. Walker et al. 2000, 3.
57. Advisory Committee on School-Based Management 2000.

58. Advisory Committee on Teacher Education and Qualifications 2003; Advisory Committee on Teacher Education and Qualifications 2006; Advisory Committee on Teacher Education and Qualifications 2009.
59. Kelley & Shaw 2009; Leithwood & Levin 2008.
60. Ontario College of Teachers 2016, 7.
61. Goldring, Patterson, & Huff 2010, 8.
62. Knowles, Holton, & Swanson 2015.
63. Ontario College of Teachers 2016, 24.
64. Ontario College of Teachers 2016, 24.
65. Knowles, Holton, & Swanson 2015.
66. “The Program for Aspiring Principals of Secondary and Primary Schools in Hong Kong” 2016.
67. D. Ng 2015b, 8.
68. National Institute of Education 2016, 19.
69. National Institute of Education 2016, 10.
70. The Institute for Education Leadership, Ontario 2013; Walker et al. 2000.
71. The Institute for Education Leadership, Ontario 2013; Walker et al. 2000; “Professional Standards for Compulsory Education Principals” 2013. Private translation (the authors accept responsibility for any errors in translation or interpretation).
72. CarringtonCrisp 2016.
73. D. Ng 2015b, 6.
74. Duguid & Collins 1989.
75. Kemmis & McTaggart 1992.
76. Cohen, Manion, & Morrison 2011, 344–61.
77. Quinn & Quinn 2016.
78. P. T. Ng 2013, 69.
79. Center for Educational Leadership 2016.
80. P. T. Ng 2013, 69.
81. P. T. Ng 2013, 69.
82. Wong 2005, 552. Jensen et al. 2016.
83. Wong 2005, 552.
84. Snook, Ibarra, & Ramo 2010.

85. Day 2014; Ely, Ibarra, & Kolb 2011; Ibarra 2015.
86. Petriglieri & Petriglieri 2010.
87. Lord & Hall 2005; Petriglieri & Petriglieri 2010.
88. Day 2014; Day, Zaccaro, & Halpin 2004.
89. Ontario College of Teachers 2016, 26.
90. Ontario College of Teachers 2016, 25.
91. Ontario College of Teachers 2016, 24–25.
92. Ontario College of Teachers 2016, 25.
93. McNiff & Whitehead 2009, 15.
94. Ibarra 2003.
95. P. T. Ng 2011, 303.
96. Phelps & Graham 2010. Cohen, Manion, & Morrison 2011, 351. P. T. Ng 2013; P. T. Ng 2011; D. Ng 2015a.
97. Phelps & Graham 2010, 187. Cited in Cohen, Manion, & Morrison 2011, 351.
98. P. T. Ng 2013, 73.
99. D. Ng 2015a; D. Ng 2015; D. Ng 2015b.
100. D. Ng 2015b, 1.
101. P. T. Ng 2011, 305.
102. D. Ng 2015b, 1.
103. D. Ng 2015b, 6.
104. P. T. Ng 2011, 304.
105. P. T. Ng 2011, 305.
106. D. Ng 2015b, 8.
107. D. Ng 2015b, 7.

References

“About Wial.” Retrieved December 1, 2016. <http://www.wial.org/about-wial>.

Advisory Committee on School-Based Management. 2000. “Transforming Schools into Dynamic and Accountable Professional Learning Communities: School-Based Management Consultation Document.”

Advisory Committee on Teacher Education and Qualifications. 2003. “Towards a Learning Profession: The Teacher Competencies Framework and the Continuing Professional Development of Teachers.” <http://www.acteq.hk/media/ACTEQ-%20Eng.pdf>.

———. 2006. “Towards a Learning Profession; Interim Report on Teachers” Continuing Professional Development.” Hong Kong: Advisory Committee on Teacher Education and Qualifications.

———. 2009. “Towards a Learning Profession: Third Report on Teachers” Continuing Professional Development.” Hong Kong. [http://www.acteq.hk/userfiles/file/3rd%20Report%20on%20TCPD/Eng/TCPDreport\(forward\).pdf](http://www.acteq.hk/userfiles/file/3rd%20Report%20on%20TCPD/Eng/TCPDreport(forward).pdf).

Armstrong, D. 2014. “Transition to the Role of Principal and Vice Principal Study.” *The Institute for Education Leadership*.

Branch, G., Hanushek, E. & Rivkin, S. 2013. “School Leaders Matter.” *Education Next* 13 (2): 62–69.

CarringtonCrisp. 2016. *Time for MBA 2.0*. http://www.carringtoncrisp.com/tomorrows_mba.

“CarringtonCrisp - Tomorrow’s MBA.” 2016. Accessed October 17, 2016. http://www.carringtoncrisp.com/tomorrows_mba.

Center for Educational Leadership. 2016. “Preparation for Principalship Program: Pamphlet.” <http://cel.edu.hku.hk/wp-content/uploads/sites/4/2016/08/AP1617-Leaflet.pdf>.

Cheng, Y. C. 2009. “Hong Kong Educational Reforms in the Last Decade: Reform Syndrome and New Developments.” *The International Journal of Educational Management* 23 (1): 65–86. doi:<http://dx.doi.org/10.1108/09513540910926439>].

Cohen, L., Manion, L., & Morrison, K. 2011. *Research Methods in Education*. 7th ed. Routledge.

Day, D., ed. 2014. *The Oxford Handbook of Leadership and Organizations*. New York: Oxford University Press.

Day, D. V., Zaccaro, S. J., & Halpin, S. M. 2004. *Leader development for transforming organizations: growing leaders for tomorrow*. Mahwah, NJ: Psychology Press.

Duguid, P, & Collins, J. S. 1989. "Situated Cognition and the Culture of Learning." *Educational Researcher* 18 (1): 32–42.

Education Bureau Hong Kong. 2016. "School Administration Guide (2015-2016)." www.edb.gov.hk/en/sch-admin/regulations/sch-admin-guide/index.html.

Goldring, E., Patterson, C., & Huff, J. 2010. "Conceptualizing and Evaluating Professional Development for School Leaders." Asian Leadership Roundtable, Institute of Education Hong Kong. [www.eduhk.hk/apclc/roundtable2010/paper/paper%20\(Goldring\).pdf](http://www.eduhk.hk/apclc/roundtable2010/paper/paper%20(Goldring).pdf).

Ely, R. J., Ibarra, H., & Kolb, D. M. 2011. Taking Gender Into Account: Theory and Design for Womens Leadership Development Programs. *Academy of Management Learning & Education*, 10(3), 474-493.

Gurdjian, P, Halbeisen, T., & Lane, K. 2014. "Why Leadership-Development Programs Fail." *McKinsey Quarterly*. January 2014. http://www.mckinsey.com/insights/leading_in_the_21st_century/why_leadership-development_programs_fail.

Leonard, H., & Lang F. 2010. "Leadership Development via Action Learning." *Advances in Developing Human Resources* 1 (16).

Hallinger, P, & Lee, M. 2012. "A Global Study of the Practice and Impact of Distributed Instructional Leadership in International Baccalaureate (IB) Schools." *Leadership and Policy in Schools*, 11(4), 477-495. doi:10.1080/15700763.2012.700990

Hitchcock, G. & Hughes, D. 1995. *Research and the Teacher*. Second. London: Routledge.

Hong Kong Baptist University. 2016. "Preparation for Principalship Course Handbook 2016."

Ibarra, H. 2003. "Managing Take-Off and Re-Entry." *European Business Forum*,14: 28-30

Ibarra, H. 2015. *Act like a Leader, Think like a Leader*. Boston, Massachusetts: Harvard Business Review Press.

Jensen, B., Hunter, A., Sonnemann, J., & Burns, T. 2012. *Catching up: Learning from the Best School Systems in East Asia*. Melbourne, Victoria: Grattan Institute.

- Jensen, B., Sonnemann, J., Roberts-Hull, K., & Hunter, A. 2016. *Beyond PD: Teacher Professional Learning in High-Performing Systems, Australian Edition*. Washington, D.C.: National Center on Education and the Economy.
- Kelley, C., & Shaw, J. 2009. "Comprehensive Leadership Development." In *Handbook of Research on the Education of School Leaders*, edited by Michelle D. Young, Gary M. Crow, Joseph Murphy, and Rodney T. Ogawa, 499–514. New York: Routledge.
- Tan, H. K., Heng, M. A., & Lim-Ratnam, C. 2016. *Curriculum Leadership by Teacher Leaders: Theory, Design and Practice*. Singapore: Routledge.
- Kemmis, S., & McTaggart, S. 1992. *The Action Research Planner*. Third. Victoria, Australia: Deakin University Press.
- Leithwood, K. & Levin, B. 2008. "Understanding and Assessing the Impact of Leadership Development." In *International Handbook on the Preparation and Development of School Leaders*, edited by Lumby, J., Crow, G., and Pashiardis, P, 280–301. New York/London: Routledge.
- Knowles, M. S., Holton, E. F. & Swanson, R. 2015. *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*. 8th ed. New York: Routledge.
- Leithwood, K., Louis, K. S, Anderson, S., & Wahlstrom, K. 2004. *How Leadership Influences Student Learning*. Wallace Foundation. <http://conservancy.umn.edu/handle/11299/2035>.
- Lord, R. G., & Hall, R. 2005. "Identity, Deep Structure and the Development of Leadership Skill." *The Leadership Quarterly* 16: 591–615.
- MacPherson, I. and Brooker, R. 2000. "Positioning Stakeholders in Curriculum Leadership: How Can Teacher Educators Work with Teachers to Discover and Create Their Place?" *Asia-Pacific Journal of Teacher Education* 28 (1): 69–85.
- Marsh, C., & Chi-Kin Lee, J. 2014. *Asia's High Performing Education Systems: The Case of Hong Kong*. Routledge Series on Schools and Schooling in Asia. Hoboken : Taylor and Francis, 2014.
- McNiff, J., & Whitehead, J. 2009. *Doing and Writing Action Research*. London: Sage.
- Ministry of Education, China. 2013. "Professional Standards for Compulsory Education Principals."

National Institute of Education. 2016. *Leaders in Education Programme 2016 – Handbook for Participants*. Singapore: National Institute of Education Singapore.

National Institute of Education, Singapore. 2013. “Developing School Leaders For The Nation.” Office of Graduate Studies & Professional Learning. <http://155.69.97.30/docs/default-source/GPL/leadership-programme.pdf?sfvrsn=4>.

———. 2016. “MLS Management and Leadership in Schools: Handbook for Participants.” National Institute of Education, Singapore.

———. 2016. “Digital Repository: Diploma in Educational Administration Handbook.” Accessed August 16. <https://repository.nie.edu.sg//handle/10497/3512>.

Ng, D. 2015. “World-Class Leadership Development.” In The HEAD Foundation, 3:19–29.

———. 2015a. Complexity Leadership Learning: An Alternative to Competency-Driven Learning.” Centre for Strategic Education, Melbourne.

———. 2015b. Leadership Learning for Complex Organizations.” *Cogent Education* 2.

Ng, P. T. 2011. “How Participants Understand Complexity Theory through a School Leadership Programme in Singapore.” *International Journal of Complexity in Leadership and Management* 1 (3): 301–13.

———. 2013. “Developing Singapore School Leaders to Handle Complexity in Times of Uncertainty.” *Asia Pacific Education Review* 14 (1): 67–73.

OECD. 2014. *TALIS 2013 Results: An International Perspective on Teaching and Learning*. OECD Publishing.

Ontario College of Teachers. 2016. “Principal’s Qualification Program Draft July 2016.” www.oct.ca/-/media/PDF/Principals%20Qualification%20Program%202009/Principals%20Qualification%20Program%20August%202016e.pdf.

Ontario Ministry of Education. 2013. “Principal/ Vice Principal Performance Appraisal: Technical Requirements Manual.” www.edu.gov.on.ca/eng/policyfunding/leadership/PPA_Manual.pdf.

Petrie, N. 2014a. *Future Trends in Leadership Development*. Center for Creative Leadership. <http://insights.ccl.org/wp-content/uploads/2015/04/futureTrends.pdf>.

———. 2014b. *Vertical Leadership Development - Part 1: Developing Leaders for a Complex World*. Center for Creative Leadership.

Petriglieri, G., & Petriglieri, J. L. 2010. "Identity Workspaces: The Case of Business Schools." *Academy of Management Learning & Education* 9 (1): 44–60.

Phelps, R., and Graham, A. 2010. "Exploring the Complementarities between Complexity and Action Research: The Story of Technology Together." *Cambridge Journal of Education* 40 (2): 183–97.

Quinn, R. W., & Quinn, R. E. 2016. "Change Management and Leadership Development Have to Mesh." *Harvard Business Review*. January 7, 2016. <https://hbr.org/2016/01/change-management-and-leadership-development-have-to-mesh>.

Snook, S., Ibarra, H., and Guillen Ramo, L. 2010. "Identity-Based Leader Development." *In Leadership Theory and Practice*, 657–78. Harvard Business Press.

The Institute for Education Leadership, Ontario. 2013. "The Ontario Leadership Framework: A School and System Leader's Guide to Putting Ontario's Leadership Framework into Action." <https://education-leadership-ontario.ca/en/resource/ontario-leadership-framework-olf/>.

"The Program for Aspiring Principals of Secondary and Primary Schools in Hong Kong." 2016. Accessed October 25. http://educ.hkbu.edu.hk/pfp/na_index.htm.

Volz-Peacock, M., Carson, B. & Marquardt, M. 2016. "Action Learning and Leadership Development." *Advances in Developing Human Resources* 18 (3): 318–33.

Walker, A., Dimmock, C., Chan, A., Chan, W.K., Cheung, M.B., & Wong, Y.H. 2000. "Key Qualities of the Principalship in Hong Kong." Hong Kong: Hong Kong Centre for the Development of Educational Leadership. www3.fed.cuhk.edu.hk/eldevnet/NAFPhk_SP/Key_Qualities_of_the_Principalship_in_Hong_Kong.pdf.

Wong, Kam-cheung. 2005. "Conditions and Practices of Successful Principalship in Shanghai." *Journal of Educational Administration* 43 (6): 552–62.

Zhang, M., Ding, X., and Xu, J. 2016. *Developing Shanghai's Teachers*. Washington, D.C.: National Center on Education and the Economy. <http://www.ncee.org/wp-content/uploads/2016/01/DevelopingShanghaiTeachersWEB.pdf>.

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