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Implementing teacher performance and development frameworks— some enabling factors: A review of the international evidence-based literature 2008–18

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Executive summary

Purpose

In recent decades, education systems across the world have introduced teacher performance and development frameworks aimed at improving national performance, student achievement and measures of managing teacher performance and development. Such action is arguably motivated by the research linking improved teacher quality with improved student outcomes. This paper aims to identify the factors enabling successful teacher performance and development frameworks by reviewing the international evidence-based literature from 2008 to 2018.

Findings

Educational systems implementing teacher performance and development frameworks tend to take action in three core areas. First, accountability measures are introduced through the use of data systems to measure performance in national, regional and international assessments—thereby enhancing transparency. Second, there is a strong focus on professionalisation—that is, improving teaching by raising the calibre of recruiting systems, pre-service education and early career support and expanding the requirements of professional development for existing teachers and leaders. Third, successful systems are intent on preparing and sustaining instructional leaders for the key role of managing and leading reforms for improved educational outcomes.

Educational systems in Singapore, Finland, Germany and Canada are described as top performing systems as measured by results in international assessments. These individual cases illustrate unique and diverse challenges associated with performance and development in their ongoing pursuit for sustained successful outcomes. Each of these cases has relevance to the Australian context.

Conclusions

The international evidence-based literature illustrates implementation of effective teacher performance and development frameworks across a variety of educational systems. While no single country provides measures that are entirely applicable to the Australian context, recommendations from recent strategic reviews on Australia's school system reflect an impetus to implement appropriate transparency, professionalisation and leadership interventions akin to those in the international case studies.

Table of Contents

Introduction	3
Teacher performance and development frameworks	4
Dominant interventions and themes relating to performance and development frameworks—a literature review	4
Transparency	5
Professionalisation	7
Leadership	8
Case studies	9
Singapore	10
Finland.....	13
Germany.....	16
Canada.....	19
Conclusion	22

Introduction

Australian schooling aims for all young Australians to become successful learners, confident and creative individuals and active and informed citizens—positioning them to live fulfilling, productive and responsible lives. It aims for students to excel by international standards, while reducing educational disadvantage.¹

To meet this vision, the school education system aims to engage all students, promote student participation and deliver high-quality teaching with a world-class curriculum. The vision and objectives align with the educational goals for young people in the *Melbourne Declaration on Educational Goals for Young Australians*.²

Achieving Australia's educational vision and objectives for schooling, however, is not without challenge: a number of issues exist that relate directly to the quality of teacher performance and development.

School system performance has declined over the last decade, as measured by participation in international tests and the National Assessment Program.³ Australia's average scores in the Programme for International Student Achievement (PISA), from 2006–07 to 2015–16, have declined by 3 per cent in scientific literacy; and, from 2004–05 to 2015–16, have declined by 5 per cent in mathematical literacy and 3.5 per cent in reading.⁴ Results of the National Assessment Program for Literacy and Numeracy (NAPLAN) reveal that learning gaps widen alarmingly as students move through school to year 9. Learning gaps are also notable for educationally disadvantaged students and for those students attending disadvantaged schools.⁵ These results have occurred in spite of significant increases in school funding.⁶

Falling enrolments in university teaching courses is one challenge, among several, that the Australian teaching profession is currently experiencing.⁷ The number of entrants into teaching courses with an Australian Tertiary Admission Rank between 30 and 50 has trebled in the last 15 years, sparking concerns about levels of attainment in teaching degrees.⁸ Further, increased numbers of early-career teachers are leaving the profession.⁹ This latter trend echoes concerns about the quality and relevance of professional development and support available to new and existing teachers.¹⁰ In addition to these trends affecting the workforce, there is no data available for reporting on teacher quality, a crucial indicator of governments' objective that Australian school education delivers high-quality teaching with a world-class curriculum.¹¹

Undoubtedly, these circumstances in the Australian educational context are cause for unease, given the landmark research illustrating that teachers are the single most important 'in-school' influence on student achievement.¹² The issues highlight a need to focus on more effective interventions that can raise educational performance within the school system.

Teacher performance and development frameworks have generally emerged from a need to improve both student achievement and measures of managing teacher performance and

¹ Productivity Commission, *Report on government services: School education and attachment tables*: Chapter 4, Canberra, 2018, p. 4.6.

² Ministerial Council on Education, Employment, Training and Youth Affairs. *Melbourne Declaration on Educational Goals for young Australians*. Melbourne. 2008; and Council of Australian Governments (COAG), *National Education Agreement*. Canberra. 2009.

³ Productivity Commission, op. cit., p. 4.19.

⁴ Organisation for Economic Co-operation and Development (OECD) Programme for International Assessments 2015, *Results by country*, <http://www.oecd.org/pisa/>; Productivity Commission, *Report on government services: School education attachment tables: Chapter. 4*, Canberra, 2017.

⁵ P Goss, J Sonnemann, J Chisholm, L Nelson, *Widening gaps: what NAPLAN tells us about student progress*, Grattan Institute, 2016, p. 2.

⁶ Australian Government, *Innovation and Science Australia, Australia 2030: prosperity through innovation*, Canberra, 2017, p. 27.

⁷ R Bolton, 'The key to lifting productivity', *Australian Financial Review*, 5 February, 2018, p. 12, accessed 5 February 2018.

⁸ R Wilson citing Australian Institute for Teaching and School Leadership (AITSL) data in 'Spat over low entry level for degrees', *Sunday Telegraph*, 12 August, 2018, p. 13.

⁹ Australian Broadcasting Corporation (ABC), 'Why do teachers leave?', Opinion, ABC News website, accessed 6 February 2017.

¹⁰ OECD, *Results from TALIS 2013: Australia*, OECD, Paris, 2013.

¹¹ Productivity Commission, op. cit., p. 4.14.

¹² J Hattie, *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*, Routledge, New York, 2009.

development. The purpose of this paper is to identify evidence-based factors enabling the successful implementation of teacher performance and development frameworks.

The paper aims to:

- explain the premise of teacher performance and development frameworks
- outline factors associated with the implementation of performance and development frameworks in successful educational systems and illustrate these factors through three themes: transparency, professionalisation and leadership
- describe the key challenges and outcomes of performance and development framework implementation in four international case studies (Singapore, Finland, Germany and Canada) and
- offer some considerations for performance and development framework implementation in the Australian context.

Teacher performance and development frameworks

In this paper, a ‘teacher performance and development framework’ refers to the policy, processes and strategies that support teachers in their professional performance and development, with the ultimate aim of improving teaching and learning outcomes and student performance. An integral component of this kind of framework is the performance and development cycle, which typically requires a teacher to establish professional goals to form a professional development plan. Professional goals are often linked to standards that identify what is expected of teachers within the core domains of teaching: professional knowledge, practice and engagement. The standards may then be separated into descriptors at different professional career stages.¹³

Teacher performance and development incorporates a multitude of methods to appraise, evaluate, support and manage teacher performance and development. These may include school evaluations, classroom observations, teaching performance portfolios, teacher interviews, performance and development interviews, peer ratings and student ratings.¹⁴ The performance and development cycle may also include individual or self-evaluations and reflections on teaching practice, and/or feedback from a supervisor.

Reference to ‘high-performing’, ‘successful’, ‘effective’ or ‘top’ systems refers to those systems that have achieved high-level rankings in international assessments such as PISA.¹⁵

Dominant interventions and themes relating to performance and development frameworks—a literature review

International practices, research and evidence—and a range of economic and political circumstances— have combined to shape an education reform agenda for basic education.¹⁶ At system and school levels, the implementation of contemporary teacher performance and development frameworks is generally a work in progress for many countries at various stages along the improvement continuum. There appears to be a convergence on three core themes that recur in the literature:

¹³ AITSL, *Australian professional teaching standards for teachers*, Australian Government, Melbourne, 2011.

¹⁴ J Clinton et al., *Teacher effectiveness systems, frameworks and measures: A review*, Centre for Program Evaluation, Melbourne, 2016. Retrieved from Parliamentary Library, Canberra, 30 January 2018.

¹⁵ PISA is the Program for International Student Assessment, a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15 year old students. In 2015, 72 countries (28 million students) participated in a two-hour test assessing science, maths, reading, problem solving and financial literacy. Information about the learning environment and students’ attitudes are gathered from student questionnaires. Previous tests were held in 2000, 2003, 2006, 2009, 2012.

¹⁶ OECD, ‘The public policy framework for implementing education reforms’ in *Establishing a framework for evaluation and teacher incentives: Considerations for Mexico*, OECD Publishing, Paris, 2011.

- **Transparency** through new accountability measures effectively demand that systems, schools, teaching practice and student outcomes become more open about educational outcomes
- **Professionalisation** of teaching has emerged through reform of teacher policies including evaluation, professional development, incentives and recruitment and
- **Leadership**, at both system and school levels, is recognised as fundamental to the success of all the developments, with increased measures to support leader accountability, evaluation and improvement.

Transparency

Increasingly government education authorities are publicly accountable, being subject to external audit and review at different levels. Holding agents responsible for the investment of public resources, and the service provided with such resources, is an expanding feature of government reform in a number of countries.¹⁷ Countries use a range of techniques for the evaluation and assessment of students, teachers, schools and education systems.¹⁸

At a global level, participation in international assessments and educational reviews has enhanced transparency of educational outcomes for many nations, as they seek to benefit from the information that international comparative measures provide. The number of countries participating in PISA increased from 42 in 2000–01 to 73 in 2015, and an additional seven countries participated in PISA for Development.¹⁹ Greater participation, in international or regional, large-scale assessments (such as PISA) over recent decades has been attributed to several factors—including increased worldwide technical capacity for those undertaking assessments, fuelled, in part, by previous international or national assessments, the concerns of educators, and by the analytic interests of macro economists for valid and reliable cross-national data regarding education outcomes.²⁰ Additional reasons for growth in international large-scale assessments may be due to other concurrent changes at national level. The context for assessment has changed in many countries over the past 15 years with near-universal basic education, better education information systems, better governance, greater ease of doing business and more open information.²¹

At a national level, educational systems attempt to get the foundations in place to raise the quality of student skills by creating systems for data tracking, teacher accountability and pedagogy. Student assessments and school inspections are introduced to create reliable data on performance and to hold schools accountable for improvement. This data is used to identify and tackle specific areas with lagging performance (for example, subjects, grades, gender differences) and tackle underlying causes. These interventions are seen to provide transparency to schools and/or the public on school performance.²² Many countries have increased transparency of and accountability for school outcomes through the development of national assessment programs, in addition to the introduction of national curricula; curriculum standards and assessment (including measures of student learning and growth); content and performance standards for students; and formative and summative assessments.²³

¹⁷ OECD, 'School evaluation, teacher appraisal and feedback and the impact on schools' in *Creating effective teaching and learning environments: First Results from TALIS*. OECD publishing, Paris, 2009.

¹⁸ OECD, *Common policy challenges in evaluation and assessment frameworks*, OECD, Paris, 2010.

¹⁹ M Lockheed, *Why do countries participate in international large-scale assessments? The case for PISA*. Policy Research Working Paper; No. WPS 7337, Washington, D.C., World Bank Group, 2015, p. 3. The PISA for Development (PISA-D) initiative was launched by the OECD and its partners aim to encourage and facilitate greater PISA participation by interested and motivated low and middle income countries.

²⁰ M Lockheed, *The craft of educational assessment: Does participating in international and regional assessments build assessment capacity in developing countries?* International Association for the Evaluation of Educational Achievement, Amsterdam, 2010.

²¹ M Lockheed, *Why do countries participate in international large-scale assessments? The case for PISA*, op. cit., p. 17.

²² McKinsey and Company, *How the world's most improved school systems keep getting better*, November 2010, p. 35.

²³ OECD, 'The public policy framework for implementing education reforms', op. cit., pp. 28–33.

At a local level, the focus in a number of countries has shifted to aspects of school accountability and school improvement.²⁴ Performance in schools is increasingly judged on the basis of effective learning outcomes. Information is critical to knowing whether and how the school system is delivering good performance and to provide feedback for improvement. In all member countries of the Organisation for Economic Co-operation and Development (OECD), there is widespread recognition that evaluation and assessment frameworks are key to building stronger and fairer school systems. Inspection services are used in some countries to evaluate teachers and/or schools, and teacher evaluation is becoming more widely used.²⁵

Transparency of student and school performance data—perhaps the most contentious of accountability indicators—is commonly accepted in high-performing systems, because evaluation and accountability are integral to the success of professional learning in schools. Evaluation and accountability focus not only on student performance, but on the quality of instruction and professional learning.²⁶ This trend may be reflected in research that suggests the tension between evaluation for accountability and evaluation as part of the innovative process is often one of time. Effective implementation strategies include processes that help reduce tensions including openness to improving ideas, being pragmatic, negotiating and renegotiating meaning and relationships.²⁷

Teacher evaluation is a policy priority for many countries and a critical part of the performance and development cycle. Well-designed systems tie teacher evaluation to clear standards and competencies; are integrated with broader assessment and evaluation frameworks; and are based on multiple measurements, including multiple sources of evidence collected over a period of time.²⁸ They emphasise timely feedback linked to specific ideas for improving teaching and opportunities to practice.²⁹ In high-performing systems, the links between teacher evaluation and professional development are strengthened. This has the effect of supporting teacher professionalisation, learning and collaboration. Teachers hold personal responsibility for student performance and are accountable to each other for student learning outcomes. Further, they contribute to each other's development through peer-led support where learning is emphasised through peers and innovative teaching practices are identified, shared and supported with system funding.³⁰

A common feature of high-performing systems is the observation of lessons, which enables teachers to make their practice transparent by openly practicing their craft. Peer evaluation and working in teams leads to professional collaboration and can magnify the impact on student learning. New ideas are encouraged to support teaching and learning and can manifest in approved school improvement projects or action research to improve teaching and learning outcomes. There is movement from rigid prescription to effective educators having greater pedagogical autonomy and flexibility within agreed standards, curriculum frameworks, resources and learning models.³¹

Across most systems, however, the issues of accountability and transparency are politically sensitive. Specific context is paramount in deciding how the reforms are implemented. The significance of decision-making around policy settings has been illustrated by the failure of some mandated approaches that have created serious tensions between educational system authorities, schools, teachers and labour unions.³²

²⁴ OECD, 'School evaluation, teacher appraisal and feedback and the impact on schools', op. cit.

²⁵ OECD, *Common policy challenges in evaluation and assessment frameworks*, OECD Publishing, Paris, 2010.

²⁶ B Jensen, *Beyond PD: teacher professional learning in high performing systems*. Learning First. 2016, p. 47.

²⁷ L Earl and H Timperley, 'Evaluative thinking for successful educational innovation', *OECD Education Working papers*, No. 122, OECD Publishing, Paris, 2015.

²⁸ Ibid.

²⁹ J Looney, 'Developing high-quality teachers: teacher evaluation for improvement', *European Journal of Education*, 46(4), 2011, pp. 440–55.

³⁰ McKinsey, *How the world's most improved school systems*, op. cit., p. 56.

³¹ Ibid., p. 45.

³² Ibid., pp. 66–67.

Professionalisation

Building a highly skilled professional workforce is central to a country's ability to improve the outcomes of schooling for its young people.³³ Reforming teacher policies have included evaluation, professional development, incentives, education and recruitment.³⁴ Some see enhancing the profession of educators as desirable so that teaching is regarded as a high-status profession, offering attractive remuneration comparative to other professions. Such reform, however, relies on a shift from central control over the system and its educators to where the school system relies on the values and behaviours of its educators.³⁵

Professionalising the teaching sector begins with high-level recruitment to attract quality teaching candidates. In high-performing systems, prospective teacher candidates are identified and drawn from the top third of school graduates. A period of substantial tertiary pre-service training focuses on building curriculum content expertise, teaching skills, and learning how to diagnose and support students with learning difficulties. The quality of pre-service training better prepares students for entry into the profession, and certification requirements raise the calibre of teachers entering the teaching profession.³⁶

Upon entering the profession, new teachers are supported with strong induction and mentoring programs. National curriculum and professional learning frameworks, professional teaching standards, standardised assessment tools and provision of curriculum materials provide teachers with a clear idea of what constitutes quality teaching. High-performing systems around the world know that improving the effectiveness of teaching is the way to lift school performance. They know teaching improves when teachers learn from each other, so they ensure teachers are mentored and teach classes in front of skilled observers who provide constructive feedback.³⁷ Teachers demonstrate commitment to in-school sharing and learning through lesson observations, collaborative planning, developing and assessing student work. They use professional learning programs that encourage and require teacher collaboration (including induction, mentoring, supporting networks) and develop a collaborative school culture between teachers, students and community. Peer-to-peer collaboration often extends to inter-school collaboration.³⁸

There is also greater focus on sustained, consistent and structured coaching where highly skilled educators with agreed routines and practices embed improvements.³⁹ Further, investment in technical skills is built through lesson observations, interschool learning and research, and peer-reviewed findings of school-based action research projects. The quality of existing teachers and principals is enhanced by raising professional development requirements, including completion of mandatory professional development hours per annum; in-service training programs; coaching on practice; accreditation; clearly defined career tracks; and teacher and community forums. Schemes are developed to reward high performance, along with structures for teacher and principal remuneration according to the role they play.⁴⁰

Professional learning is ongoing and linked to teacher registration, certification, accreditation, career tracking and remuneration. Teachers may select a particular career pathway from teacher mastery, research, professional learning or leadership. There is a culture of continuous professional learning, which is frequently led by peers, effectively capitalising on the skills of expert teachers. Professional learning is driven by research. In schools this may take the form of teacher and school-based or joint

³³ OECD, 'In-service teacher evaluation: Policy and implementation issues', in *Establishing a framework for evaluation and teacher incentives: Considerations for Mexico*, OECD Publishing, Paris, 2011, pp. 79–90.

³⁴ OECD, 'The public policy framework for implementing education reforms', op. cit., pp. 28–33.

³⁵ McKinsey, *How the world's most improved school systems*, op. cit., p. 40.

³⁶ Ibid., p. 39.

³⁷ B Jensen, *Making time for great teaching*, Grattan Institute, 2014, p. 2.

³⁸ L Darling-Hammond, *Empowered educators: How high performing systems shape teaching quality around the world*, Jossey-Bass, San Francisco, 2017, pp. 105–48.

³⁹ McKinsey, *How the world's most improved school systems*, op. cit., p. 73.

⁴⁰ Ibid., p. 28.

school-based action research. Often peers review the findings of action research so that new strategies, innovations and teaching practice are informed by research.⁴¹

When the above conditions are in place, we find teachers working within schools acting as autonomous professional learning communities. In high-performing systems, learning communities have emerged as a cornerstone program for effective professional learning. They are not simply platforms for shallow behaviours, such as preparing lesson plans or exchanging teaching materials; rather, when well organised, learning communities help initiate a cultural shift towards creating expectations for improvement within schools and teachers.⁴²

Finally, structural support is required to maximise the impact of professional development in successful systems. There is time, flexibility and resources to reflect upon and try out new ideas.⁴³ In addition, rotation and secondment programs occur across schools and between schools and the centre so that innovative practice is identified, sponsored and shared.⁴⁴

Leadership

The quality of the leadership and management of schools has become a priority in education systems across the world. It has been suggested that the most significant leadership factor affecting student learning is the principals' focus on leading teacher learning.⁴⁵ The OECD's comparative review of school leadership identifies a focus supporting, evaluating and developing teacher quality as a core of effective leadership. This includes coordinating the curriculum and teaching program, monitoring and evaluating teaching practice, promoting teachers' professional development and supporting collaborative work cultures.⁴⁶

There is evidence to suggest that instructional leadership is associated with the managerial aspects of teaching, such as the use of effective and supportive teacher appraisals and feedback processes to improve instruction.⁴⁷ High-performing principals focus on instructional leadership and see the development of teachers as their most important task.⁴⁸ Measures of instructional leaders include communicating a clear vision for the school, setting high standards for teaching and student learning, understanding how children learn, monitoring and tracking academic progress and the quality of teaching in the school.⁴⁹ Instructional leadership is associated with schools that make frequent use of an appraisal process aimed at student learning outcomes and at teachers' use of professional development. It is also associated with adopting specific professional development plans tailored to help teachers improve their teaching strategies.⁵⁰ School leaders have to be able to adapt teaching programs to local needs, promote teamwork among teachers and engage in teacher monitoring, evaluation and professional development.⁵¹

Further, principals with effective instructional leadership skills employ the essential actions required for reaching expected school performance and improvements.⁵² Aligning instruction with external standards, setting school goals for student performance, measuring progress against those goals and making adjustments in the school program to improve performance are important leadership

⁴¹ Ibid., p. 53.

⁴² B Jensen, *Beyond PD: teacher professional learning in high performing systems*, Learning First, 2016, p. 30.

⁴³ Ibid., p. 42.

⁴⁴ Ibid., p. 28.

⁴⁵ Timperley (2011), Robinson (2011) and Leithwood and Seashore Louis (2012) cited in T Soini, J Pietarinen and K Pyhallto 'Leading a school through change – principals' hands-on leadership strategies in school reform', *School Leadership and Management*, 36, (4), 2016, pp. 452–69.

⁴⁶ A Schleicher, *Preparing teachers and developing school leaders for the 21st century: Lessons from around the world*. OECD Publishing, Paris, 2012, p. 18.

⁴⁷ OECD, *Creating effective teaching and learning environments: First results from TALIS*, OECD Publishing, Paris, 2009.

⁴⁸ OECD, *Improving teacher quality around the world: The international summit on the teaching profession*, OECD Publishing, Paris, 2011.

⁴⁹ M Siciliano, 'Professional networks and street level performance: How public school teachers' advice networks influence student performance', *American Review of Public Administration*, 47(1), 26 March 2015, pp. 79–101.

⁵⁰ Ibid.

⁵¹ B Pont, D Nusche and H Moorman, *Improving school leadership, Volume 1: Policy and practice*, OECD Publishing, Paris, 2008.

⁵² C Bloom and E Owens, 'Principals' perception on influence on factors affecting student achievement in low and high achieving urban high schools', *Education and Urban Society*, 45(2), 13 June 2011, pp. 208–33.

capabilities. Equally vital is the capacity of the leader to integrate external and internal accountability systems by supporting their teaching staff in aligning teaching instruction with agreed learning goals and performance standards.⁵³

Strong administrative skills are required to keep policy efforts aligned and avoid reform fatigue.⁵⁴ Sustainable leaders are contextually sensitive; they understand how and when to manage their staff by restricting their engagement when needed, such as, reducing the teacher community's excessive workload.⁵⁵ Operationalising effective performance and development frameworks requires a broad strategy with strong linkages between how leadership roles are structured, how resources are allocated and the focus of evaluation and accountability measures. Effective systems ensure sufficient scheduled time and space is available for teachers to meet regularly and reflect on what works and what needs to be improved.⁵⁶ However, the capacity of school leaders to shift financial and human resources strategically is often limited by training in the field, the daily engagement in operational delivery issues and the need to put aside the strategic planning that is necessary to provide an overarching vision and allocate resources.⁵⁷

Clear communication between the different levels and a high degree of trust amongst all stakeholders are critical.⁵⁸ Effective reform implementation requires the articulation and implementation of clear goals in cooperation with teachers. It requires balancing accountability and trust so that new practices become sustainable by keeping trust in the system. Cultures exist among effective school leaders and teachers who are open to feedback and serious about professional learning. Effective leaders ensure that teachers are well trained in appraisal procedures and understand how their individual goals are aligned with the school's goals. The outcomes of evaluation are clearly communicated and formal and informal opportunities for dialogue, feedback, collaboration and working in professional teams within schools are implemented. Successful leadership also draws on the expertise of colleagues through collaboration with other school leaders as critical friends.⁵⁹

In high-performing systems, leadership development is ongoing. It is recognised that new leadership is required to change schools and improve teaching. New leadership positions are created for teachers to lead professional learning; these teachers are regularly trained alongside school principals so that each school has multiple leaders to continually change practice. They work closely with school principals and ensure that teachers' individual and collective professional learning is meeting school objectives.⁶⁰

The outline of effective performance and development interventions, from a thematic standpoint, can be more fully appreciated by examining the characteristics of specific systems. A description of four systems—each at various stages of development—will illustrate the different approaches to effective policy implementation in unique contexts.

Case studies

No two educational systems or schools are the same. Contexts are unique: a successful intervention in one nation might prove a dismal failure in another. Sustaining change or reform is another issue with which systems may grapple.

Four case studies illustrate varied, successful interventions in teacher performance and development reforms across time and stages of development, and highlight unique pathways to success. The case

⁵³ A Schleicher, *Preparing teachers and developing school leaders*, op cit., p. 19.

⁵⁴ Levin (2008) cited in OECD, 'Implementing school improvement reforms' in *Education Policy Outlook 2015: Making Reforms Happen*. OECD publishing, Paris, 2015, pp. 165–68.

⁵⁵ T Soini, *Leading a school through change*, op. cit., pp. 452–469.

⁵⁶ J Jensen, *Catching up – Learning from the best in East Asia. High performing systems in East Asia*, Grattan Institute, 2012.

⁵⁷ A Schleicher, *Preparing teachers and developing school leaders*, op cit., p. 20.

⁵⁸ T Hopfenbeck, *Balancing trust and accountability? The assessment for learning programme in Norway: A governing complex education systems case study*, OECD Working Papers, No. 97, OECD publishing, Paris, 2013.

⁵⁹ Jensen, *Beyond PD*, op. cit., p.45.

⁶⁰ *Ibid.*, p. 47.

studies also exemplify potential interventions that could improve aspects of teacher performance and development in the Australian context.

The countries were selected as case studies for the following reasons:

- **Singapore** is acknowledged for having a comprehensive system for teacher evaluation as well as achieving consistently high rankings on tests of international student achievement
- **Canada** has similarity to the Australian context, a comparable education system, established teacher evaluation processes and stability in high-ranked international achievement
- **Germany** is considered to be sufficiently compatible with Australia in terms of responsibilities for education and has achieved improvement since 2000 in international PISA rankings and
- **Finland** has achieved equitable student outcomes and, despite the absence of any formal teacher evaluation system, there is a demonstrable relationship between teacher performance and development and the nation's consistently high achievement in literacy, numeracy and science measures.

Singapore

Transparency

Singapore has a highly centralised education system under the Ministry of Education Singapore.⁶¹ The country has achieved recognition for having one of the most advanced and successful education systems. More than any other country, Singapore has aggressively pursued a policy of advancing in education and other areas by systematically benchmarking the world's best performance, and creating a world-class education system based on what they have learned through their benchmarking.⁶² The nation is a top performer according to international assessment results. It achieved the highest mean scores in science, reading and mathematics in the 2015 PISA assessment.⁶³

Much of the achievement can be attributed to the evaluation and accountability mechanisms. The Ministry of Education Singapore operates a centralised teacher evaluation program, known as the Enhanced Performance Management System (EPMS).⁶⁴ School self-evaluation in Singapore is the main form of school accountability and requires that schools assess both what is happening (student test results) and why (instructional quality and professional learning). Self-evaluations centre on the School Excellence Model that guides the strategic planning of schools and includes a strong focus on professional learning among staff. Evaluation and accountability mechanisms ensure staff throughout the system are held responsible for the quality of professional learning.⁶⁵

This high-performing system has developed and implemented effective teacher development and professional learning programmes.⁶⁶ Under the EPMS, a teacher's performance is appraised annually by a number of people and against 16 competencies. Further, teacher performance is assessed on contribution to the academic and character development of students; collaboration with parents and community groups; and contribution to colleagues and the school as a whole. This individual

⁶¹ J Clinton et.al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

⁶² OECD, 'Singapore: Rapid improvement followed by strong performance', *Strong performers and successful reformers in education: Lessons from PISA for the United States*. OECD Publishing, Paris, 2010, p. 174.

⁶³ OECD, *PISA 2015. PISA Results in Focus*. OECD Publishing, Paris, 2018.

⁶⁴ J Clinton et.al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

⁶⁵ OECD, 'Singapore: Rapid improvement followed by strong performance', op. cit., p. 170.

⁶⁶ Jensen, *Beyond PD*, op. cit., p.45.

appraisal system sits within the context of great attention to the school's overall plan for educational excellence, since all students have multiple teachers (including in primary school).⁶⁷

Professional learning is built into the system. A three-stage process embeds self-assessment, coaching and collaboration in schools even before any targeted professional learning is introduced. Performance planning at the beginning of the year requires teachers to evaluate their teaching practice and to set goals for the year in teaching, instructional innovation and improvements and professional learning. Performance coaching from the supervisor throughout the year helps teachers achieve their goals. There is a formal interview mid-year to assess progress towards these goals. A performance evaluation at the end of the year requires supervisors to conduct an interview and compare planned goals against actual performance. Professional learning opportunities are identified and areas targeted for improvement.⁶⁸

Evaluation and accountability extends to external professional learning courses and workshops. All systems struggle with quality control because quality is hard to measure and because the professional learning market is hard to regulate. Although schools usually decide on which professional learning expertise, course or workshops are the best fit for their own teachers, they do not have a lot of information on quality. However, in Singapore, feedback loops help the information flow between teachers, government and providers to facilitate quality improvements over time. The Singapore Ministry of Education issues professional learning providers with a checklist based upon the attributes of effective learning programs to help ensure that professional development is properly planned. The Ministry then collects feedback against the attributes of effective learning programs. Survey feedback is entered into online course management systems creating easy access for Ministry officials to oversee quality.⁶⁹

Professionalisation

The Thinking Schools, Learning Nation reforms, which commenced in the 1990s, were a means to place great emphasis on high recruiting standards, with teachers being selected from the top one-third of the secondary graduating class. Strong academic ability is essential, as is commitment to the profession and to serving diverse student bodies. Teachers are trained in the Singaporean curriculum at the National Institute of Education where they undertake a diploma or degree, depending on their entry level.

Teaching is a high-status profession in Singapore. By putting its energy in the front end of recruiting high-quality people and giving them good training and continuing support, Singapore does not have massive problems of attrition and persistently ineffective teachers and principals that plague many systems around the world.⁷⁰ Prospective teachers receive a monthly stipend that is competitive with the monthly salary for new graduates in other fields. They must commit to teaching for at least three years. Interest in teaching is seeded early through teaching internships for high school students. There is also a system for mid-career entry, which is a way of bringing real-world experience to students.⁷¹ Every teacher in Singapore is engaged in 17 hours of direct teaching per week and has 100 hours of paid professional development (over 12 days) per annum to improve teaching.⁷² Teachers receive considerable support to encourage ongoing growth and development as a professional. Much professional development is school-based and led by staff developers whose role may include supporting a group's (faculty) academic performance and introducing new practices, such as project-based learning or new uses of information and computing technology (ICT). Funding is available to support teacher growth and teacher networks and professional learning communities; and to encourage peer-to-peer learning and the continuous sharing of best practices. Singapore has

⁶⁷ Ibid.

⁶⁸ Jensen, *Beyond PD*, op. cit., p. 21.

⁶⁹ Ibid., p. 28.

⁷⁰ OECD, 'Singapore: Rapid improvement followed by strong performance', op. cit., p. 170.

⁷¹ Ibid., p. 169.

⁷² J Clinton et al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

allocated additional money to schools to create more time for teachers. But it is not based around a specific activity that is separated from teaching and learning.⁷³

Subject specialisation is a valued aspect of teacher development. The importance of subject-specific content and pedagogical knowledge is built into the mentoring relationship. Subject-specific skills are developed and reinforced in various ways—through initial teacher education and professional learning programs such as mentoring—and learning communities and career ladders that value these skills. Principal master teachers and master teachers are leaders and developers of professional learning in their subject. Mentoring for beginning teachers is seen as critical. It forms part of the continuum of teacher learning and growth, starting from pre-service and continuing throughout teachers' careers.⁷⁴ International teacher survey results indicate that, of all countries in the survey, Singapore has the highest ratio of teachers serving as mentors (39 per cent).⁷⁵

The concept of Professional Learning Communities (PLCs) was introduced in Singapore in 2009 to encourage collaboration in reviewing and improving practice; to date 271 schools have created PLCs.⁷⁶ In these professional learning teams, teachers share ideas through collaboration and planning of assessment tasks. Lesson observations provide feedback and sharing, communication and improvement for everyone and new ways to connect with students. Teachers are considered facilitators of learning, and are required to scan the globe for best practices in delivering content to students. They leverage technology to make a significant impact in the classroom by using ICT tools effectively. Job-embedded time is provided for collaboration, mentoring, lesson study, teacher led professional learning and professional learning communities. The Teachers' Network models several powerful ways in which peers and professional development experts collaborate. One aspect of the network is 'learning circles', in which 4 to 10 teachers work with a facilitator to solve common problems using discussions and action research—that is, the iterative process of reflecting on current teaching practices and planned experimentation with new practices.⁷⁷

Singapore is one of the clearest examples of how career tracks (ladders) and performance management programs can embed the improvement cycle in schools. They provide clear recognition and therefore incentives for teachers to improve the instruction and professional learning of other teachers. Teacher career tracks were established for leadership, teaching and senior specialist positions. Teachers and leaders are promoted based on their performance appraisals. A teacher in Singapore is promoted based on how well they engage in their own professional learning and how well they develop other teachers.⁷⁸

Teacher salaries are adjusted to ensure that teaching is seen as equally attractive as other occupations. Singapore's starting salary for teachers is roughly equivalent to the starting salary of other university educated workers—comparable to that of civil service engineers and accountants—and teachers start receiving a full monthly salary when they begin pre-service education. Salary growth over the career remains competitive; annual increments are based on performance, potential and advancement on the leadership, teaching and senior specialist career tracks.⁷⁹

Leadership

In Singapore, leaders are considered vital to school transformation and are expected to innovate continuously to get the best from their staff and school. New developing leadership is required to change schools and improve teaching. Leadership positions are created for teachers to lead teacher professional learning and ensure that teachers' professional learning is meeting school objectives. Leadership continuity is also essential as demonstrated by Singapore's strategy to architect leaders for tomorrow.⁸⁰ Distributed leadership models, with master teachers working closely with the

⁷³ Jensen, *Beyond PD*, op. cit., p. 30.

⁷⁴ Jensen, *Beyond PD*, op. cit., p. 44.

⁷⁵ OECD, *TALIS 2013 results: An international perspective on teaching and learning*, OECD publishing, Paris, 2014.

⁷⁶ OECD, 'Singapore: Rapid improvement followed by strong performance', op. cit., p. 169.

⁷⁷ J Clinton et.al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

⁷⁸ Jensen, *Beyond PD*, op. cit., p. 19.

⁷⁹ Darling-Hammond, *Empowering Educators*, op. cit., p. 51.

⁸⁰ McKinsey, *How the world's most improved school systems*, op. cit., p. 87.

principal are encouraged through new leadership programs. Only teachers who effectively develop both themselves and others rise to leadership positions.⁸¹

Teaching talent is identified and nurtured. After three years of teaching, teachers are assessed annually to see which of three career paths would suit them: master teacher, specialist in curriculum or research or school leader. Each path has salary increments. School clusters and peer-based forums provide opportunities for leadership development. Teachers with school leadership potential are moved to middle management teams and receive training to prepare them for their new roles. Middle managers' performance is assessed for their potential to become vice principals and, later principals. Each stage involves a range of experience and training to prepare candidates for school leadership and innovation. Young teachers are continuously assessed for their leadership potential and given opportunities to demonstrate and learn.⁸²

Potential principals are selected for interviews and go through leadership situational exercises. Only 35 people are selected each year for the executive leadership training. Principals are transferred between schools periodically as part of Singapore's continuous improvement strategy.⁸³

Singapore did not implement all of its reforms in one go, it changed one aspect at a time over many years, trying what worked and discarding what did not until it achieved a finely balanced, interconnected approach.⁸⁴ Yet the country is not resting on its laurels. The system is responding to a wide variety of initiatives flowing from Thinking Schools, Learning Nation, in providing highly skilled, creative workers for the twenty-first century economy. The challenge for teachers in Singapore, trained in teacher-dominated pedagogy (teaching style), is to change their practice for new kinds of learning; this challenge involves supporting autonomy while maintaining quality.⁸⁵

Finland

Transparency

Finland is one of the world's leaders in the academic performance of its secondary school students, a position it has held for the past decade despite the lack of any formal teacher evaluation system.⁸⁶ In a decentralised approach, the Finnish government defines and sets educational priorities, while schools are principally maintained and supported by municipalities (local authorities). The country has been, and continues to be, one of the OECD's top PISA performers since 2000.⁸⁷ Between 2000 and 2009, Finland ranked as a top PISA performer, topping reading results (with Korea) in 2009.⁸⁸ With equal opportunity as a key aim and focus of education, Finland has sustained improvement over time. The 2015 PISA results ranked Finland fifth in science and fourth in reading performance among OECD countries.⁸⁹

Finnish system evaluations use national assessments of learning outcomes, international student assessments, self-evaluation and external evaluation of education providers. The objectives defined in legislation and the national core curricula provide guidance for education providers (municipalities), which are responsible for designing and implementing local curricula and evaluating education.⁹⁰

Significantly, educational accountability in Finland preserves and enhances trust among teachers, students, school leaders and educational authorities; it involves the stakeholders in the process and provides a strong sense of professional responsibility and initiative. Parents, students and teachers

⁸¹ Jensen, *Beyond PD*, op. cit., p. 19.

⁸² McKinsey, *How the world's most improved school systems*, op. cit., p. 87.

⁸³ OECD, 'Singapore: Rapid improvement followed by strong performance', op. cit., p. 170.

⁸⁴ Jensen, *Beyond PD*, op. cit., p. 7.

⁸⁵ OECD, 'Singapore: Rapid improvement followed by strong performance', op. cit., p. 171.

⁸⁶ J Clinton et.al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

⁸⁷ OECD, *Education Policy Outlook: Finland*, November 2013, p. 4.

⁸⁸ OECD, *PISA 2009 Results: What students know and can do: Student performance in reading, mathematics and science*, (Volume 1), OECD Publishing, Paris, 2010.

⁸⁹ OECD, *PISA 2015: PISA Results in Focus*, OECD Publishing, Paris, 2018.

⁹⁰ OECD, *Education Policy Outlook: Finland*, op. cit., p. 12.

prefer ‘smart’ accountability—accountability that enables schools to keep the focus on learning and permit more freedom in curriculum planning.⁹¹ This collectively held ethic is underpinned by core community values and expectations for all students to succeed. There follows an acceptance that such responsibility is associated with measures of professional accountability to ensure quality teaching is maintained.⁹²

In 1991 school inspections were abolished and there is no national system for evaluating performance in schools. Today, quality assurance is maintained through a revised ideology promoting ‘steering instead of controlling’ whereby authorities seek to steer the educational system by providing information, support and funding.⁹³ Schools conduct self-evaluations as part of their responsibilities, and can also participate in external evaluations conducted by the Finnish Education Evaluation Council.⁹⁴ Principals are pedagogical leaders of their schools. Most schools have an annual performance review system, where the principal works with teachers on their evaluation to develop teaching and agree on areas for in-service training.⁹⁵ While there is no national evaluation system for teachers, guidelines for teacher appraisals are set out in the contract between the local government employer (local authorities) and the teachers’ trade union.⁹⁶

Instead of external standardised tests, assessment of student learning is based on teacher-created school tests and sample-based national assessments. There is no external standardised testing until Grade 12. Students elect voluntarily to undertake the national Matriculation Examination, which is held at the end of upper-secondary education. PISA data from 2009 reported 94.4 per cent of students are in schools where principals use assessment data to make decisions about retention or promotion of students.⁹⁷

While Finnish teachers are not assessed for school accountability purposes, there is an enormous amount of diagnostic or formative assessment at the classroom level. There is a strong emphasis on learning to teach those students who struggle and respond to the unique needs of students. Finland’s preventative approach to school failure has been successful.⁹⁸ The early intervention reform, High Standards For All, aims to detect student difficulties and problems. Individual support is very important in preventing a student falling behind, and teachers spend extra time supporting students.⁹⁹

Professionalisation

In Finland, teaching is the top choice profession for college students.¹⁰⁰ Teaching is a highly appreciated profession.¹⁰¹ Finnish teachers are drawn from the top quartile of upper-secondary graduates. Teachers complete a Masters degree requiring them to write a research-based dissertation which further engages them in disciplined inquiry in the classroom throughout their teaching career. High-quality preparation involves attendance for one year at a teacher training school following university education. There is strong focus on developing content knowledge; this substantial attention to subject-specific teaching is a shared responsibility between the teacher education faculty and the academic subject faculty at university. Like other countries with leading education systems, Finnish secondary science, technology, engineering and mathematics (STEM) teachers are required to be fully qualified in their discipline and to teach exclusively in that field.¹⁰²

⁹¹ P Sahlberg, *Finnish lessons: what can the world learn from educational change in Finland?* Hawker Brownlow Education, 2012, p. 130.

⁹² Ibid.

⁹³ OECD, *Education Policy Outlook: Finland*, op. cit., p. 23.

⁹⁴ Ibid., p. 12.

⁹⁵ Ibid.

⁹⁶ OECD, *Reviews of evaluation and assessment in education: Synergies for better learning: An international perspective on evaluation and assessment*, OECD publishing, Paris, 2013, pp. 271–382.

⁹⁷ Ibid.

⁹⁸ Ibid., p. 4.

⁹⁹ OECD, ‘Strong performers and successful reformers in education: Finland’, EDUSKILLS webinar, OECD. Retrieved from oecd.org, accessed 1 February 2018.

¹⁰⁰ Darling-Hammond, *Empowering Educators*, op. cit., p. 53.

¹⁰¹ OECD, *Education Policy Outlook: Finland*, op. cit., p. 4.

¹⁰² Australian Government, *Innovation and Science Australia 2017, Australia 2030: prosperity through innovation*, Canberra, 2017.

In addition, all teachers undertake training in diagnosing students with learning difficulties and in adapting their instruction to varying learning needs and styles of their students. There is a very strong clinical component involving at least a full year of clinical experience in a school associated with a university, aimed at developing and modelling innovative practices as well as fostering research on learning and teaching.¹⁰³

Induction and mentoring are strongly supported with mentors providing support for teachers through practical experience and the provision of in-service training. There is attention to building pedagogical (teaching) thinking skills and conducting action research. As professional development of all teachers is supported, and ongoing study is promoted, it is not uncommon for teachers gaining a PhD to remain in practice. In response to a 2007 survey on professional development, the government renewed promotion of professional learning (due to a wide variation of teachers participating in this activity) by introducing a program to support equity and leadership in teachers, lifelong learning, flexible learning paths, adaption of innovative professional development models and mainstreaming successful professional development practices.¹⁰⁴

The quality of the teaching workforce seems very likely to be the major factor accounting for the high-level of consistent performance across Finnish schools.¹⁰⁵ Finland is distinctive in that teacher development discussions are not evaluations of past performance but agreements centred on forward-looking improvement measures.¹⁰⁶ There is substantial commitment to in-school sharing and learning. Principals describe formal and informal opportunities for dialogue, feedback, collaboration and working in professional teams within schools. Teachers share large common spaces for working and to secure new ideas and useful tips for practical solutions from colleagues (crucial for new teachers). There is constant professional dialogue and weekly teacher meetings to share new ideas and knowledge; and to give peer support to and learn from colleagues. Demonstration lessons are often organised so that expertise can be shared. Finland is increasing its emphasis on induction and mentoring—an area that has previously received much less attention because of the strength of initial teacher training in the country. Mentoring has also taken on quite different characteristics in comparison to that in some other jurisdictions, shifting from the familiar one-to-one model to one of peer-group mentoring, which focuses on generating collegiality and dialogue rather than assessment.¹⁰⁷

Finnish teachers are better paid than their peers and enjoy a lighter teaching workload than the OECD average. Finland is one of the OECD countries in which teachers enjoy comparatively better working conditions, especially women teaching in upper-secondary schools. The salary gap between teachers and other professions in Finland is, on average, smaller than across OECD countries. Teachers generally spend fewer hours teaching than their peers in many other countries. Teachers in both primary and secondary schools spend over 100 hours less per year teaching than the average in OECD countries.¹⁰⁸

Teachers also enjoy substantial professional autonomy for tasks associated with interpreting the national curriculum and assessment frameworks, selection of textbooks, curriculum materials and lesson design. The curriculum framework and instructional guidance are designed to encourage an inquiry-based approach to learning and are interpreted collaboratively.¹⁰⁹

Leadership

Education development in Finland has been based on the continual adjustment of schooling to the changing needs of individuals and society. The basic values and the main vision of education as

¹⁰³ OECD, *Finland: Slow and steady reform*, op. cit., p. 125.

¹⁰⁴ Darling-Hammond, *Empowering Educators*, op. cit., pp. 105–48.

¹⁰⁵ OECD, *Finland: Slow and steady reform*, op. cit., p. 125.

¹⁰⁶ European Commission, 'The teaching profession in Europe: Practices, perceptions and policies', *Eurydice Report*, Publications Office of the European Union, Luxembourg, 2015.

¹⁰⁷ Darling-Hammond, *Empowering Educators*, op. cit., pp. 105–48.

¹⁰⁸ OECD, 'Finland - Country Note', *Education At A Glance 2014*, OECD Indicators, p. 1.

¹⁰⁹ OECD, *Education Policy Outlook: Finland*, op. cit., p. 10.

public service have remained unchanged since the 1970s, with governments maintaining their belief that only a highly and widely educated nation will be successful in world markets.¹¹⁰

A steady political situation since the 1980s and sustained educational leadership have enabled Finnish schools and teachers to concentrate on developing teaching and learning. Rather than allocating financial resources and time to implement new reforms repeatedly, teachers in Finland have been given professional freedom to develop pedagogical (teaching) knowledge and skills related to their individual needs.¹¹¹

In a decentralised approach, the municipalities (local authorities) have significant responsibility for organisation of education, funding, curriculum and hiring personnel. A national Education and Research Development Plan outlines education policy priorities every four years and the government and the Ministry of Education and Culture prepare and implement education policy.¹¹²

Leadership as a shared and collaborative practice is encouraged. School leaders have wide-ranging responsibilities and tasks within a framework of considerable autonomy. National legislation describes principals' tasks broadly as administrative matters, financial management and pedagogical matters (including student assessment, formative evaluation of staff, personnel administration and teaching).¹¹³

Continuing professional development varies from one municipality to another and is partly defined in collective trade union agreements. Employers (usually municipalities) decide on the programme and form of professional development. Municipalities are required to fund three days per year; however, some teachers report spending up to seven days a year on professional development—some of which is in their own time. Some municipalities organise common professional learning activities for all their schools, while others allow each school to design its own program.¹¹⁴

In response to the 2007 survey, which found only two-thirds of Finnish teachers had taken part in professional development, the government established the Osaava program (2010–16) to promote equity and leadership in teachers' lifelong learning, flexible learning paths, adaption of innovative professional development models and mainstreaming successful professional development practices. In addition, the program also established a continuum of professional learning starting with induction for new teachers and including support for educational leaders.¹¹⁵

The future challenges for Finland include a need to focus on developing a national program to provide more equitable for teachers to access professional learning.¹¹⁶ Further, broader trends within the governance of the education system are causing concern for some stakeholders, who attribute the national curriculum framework to a reduced role for schools in curriculum planning. These stakeholders associate the Education Sector Productivity Program (2011–2015) with a call for schools to do more with fewer resources, and to increase school sizes and mergers; and they acknowledge the country's results in 2009 PISA illustrated expanding inequalities in the education system.¹¹⁷

Germany

Transparency

The 2000 PISA results found Germany in the bottom one-third of those participating in PISA. The results further revealed that 25 per cent of students were 'at risk', and that ten per cent of these at-risk students were functionally illiterate.¹¹⁸ The problem revealed by the 'PISA shock' was seen by

¹¹⁰ P Salhberg, *Finnish lessons*, op. cit., p. 131.

¹¹¹ Ibid.

¹¹² OECD, *Education Policy Outlook: Finland*, op. cit., p. 4.

¹¹³ Ibid., p. 10.

¹¹⁴ OECD, *Finland: Slow and steady reform*, op. cit., p. 126.

¹¹⁵ Darling-Hammond, *Empowering Educators*, op. cit., p. 109.

¹¹⁶ OECD, *Finland: Slow and steady reform*, op. cit., p. 126.

¹¹⁷ P Salhberg, *Finnish lessons*, op. cit., p. 138.

¹¹⁸ OECD, *PISA 2009 Results: What students know and can do: Student performance in Reading, Mathematics and Science*, Volume 1, op. cit.

some as a problem of system transparency and accountability. Since the whole German education system had a ‘real aversion’ to the use of empirical evidence and rigorous analysis of data as the basis of educational decision making, several solutions became part of the reform.¹¹⁹

From 2003, national education performance standards were developed, and common assessments based on the performance standards were initiated for comparing the performance of 16 German states (referred to as Länder). In 2004, the Institute for Educational Progress was created to provide infrastructure and scientific capacity to support the development of standards and assessment the new monitoring system would need to gather, analyse and disseminate resulting information. Germany also committed itself to participating in three major international programs of comparative national student testing including PISA. In addition, the federal government and the Länder agreed to reporting on indicators every two years, presenting data based on a permanent core of indicators to guarantee consistent reporting.¹²⁰

Further reforms included government investment in educational research to base school policy on empirical data that elucidates system performance. In addition, school hours have been extended for students in many schools in response to the 2000 PISA results which revealed German students spent much less time in school compared to other PISA-participating countries.¹²¹

Germany has a highly structured legal framework for external school evaluations. School supervisory authorities and, in some Länder, institutes for school pedagogy are responsible for academic supervision carried out by school inspectors. They control adherence to curricula and other legal provisions. Evaluation coverage is similar across the Länder, and there is sharing of knowledge between Länder. Self-evaluation has been initiated; however, contrary to most other OECD countries, it is not a component of external evaluation. Performance in external school evaluation informs school improvement measures.¹²²

Improved PISA results between 2000 and 2009 and a number of significant innovations, have enabled Germany to be viewed as an ‘empirical about turn’.¹²³ The country has achieved sustained improvement since 2001. Described as moving from a ‘good to great’ system, Germany currently leads the OECD in improving outcomes for disadvantaged students.¹²⁴ By 2015, Germany’s PISA results were above the OECD average in all three domains (science, reading and mathematics).¹²⁵

Professionalisation

Germany’s teachers are selected from the top third of high school graduates, and have the longest pre-service training among PISA countries (5.5–6.5 years). All candidates for university degrees in teaching must undertake extensive work in the subjects they will teach. New candidate teachers are expected to major in two subjects at university; and to subsequently undertake a multi-year apprenticeship of combined supervised teaching and related course work, in addition to further mentoring, close supervision and examinations, before assuming the role of a professional teacher.¹²⁶

Teachers’ salaries are among the highest across OECD countries. Between 2010 and 2015, Germany has made further efforts to increase competitiveness of teachers’ salaries. In contrast to average OECD countries, German statutory salaries based on typical qualifications have increased by 8–10 per cent at the primary and secondary level.¹²⁷ With one of the oldest teaching workforces among OECD countries (after Italy), Germany’s teaching workforce is becoming younger; in the past decade

¹¹⁹ OECD, ‘Germany: Once weak international standing prompts strong nationwide reforms for rapid improvement’. *Strong performers and successful reformers in education: lesson from PISA for the United States*, OECD Publishing, Paris, 2011, p. 211.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² J Clinton et al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

¹²³ OECD, ‘Strong performers and successful reformers in education: Germany’, EDUSKILLS webinar, OECD. Retrieved from oecd.org, accessed 1 February 2018.

¹²⁴ McKinsey, *How the world’s most improved school systems*, op. cit., p. 19.

¹²⁵ OECD, *PISA 2015: PISA Results in Focus*, OECD Publishing, Paris, 2018.

¹²⁶ OECD, *Education Policy Outlook: Germany*, April 2014, p. 4.

¹²⁷ OECD, ‘Germany - Country Note’. *Education At A Glance 2017*, OECD Indicators, p. 5.

the share of teachers aged 50 or over in primary to upper-secondary fell by 7 percentage points. At secondary level, public school teachers' teaching time is slightly above the OECD average.¹²⁸

There are no regular or recurring teacher evaluations in Germany; and formal evaluations are mostly carried out in response to serious complaints or for decisions regarding employment such as promotion. This is attributed to the rigorous training German teachers receive. Evaluations are conducted by an external inspector employed by the Länder who relies solely on their professional judgement, as there is no framework or set criteria for evaluation. Teaching standards in Germany are set at a national level; however, they are not available in English.¹²⁹ Legal regulations for teacher appraisal, vary across the Länder, with teacher unions involved in some Länder. Appraisal results can affect career advancement and changes in responsibilities, but they do not affect pay levels. Teachers are appraised mainly at early career stages. More regular evaluations, carried out in some Länder, are considered to contribute to improving the status of the profession and quality teaching.¹³⁰

Teachers are required to work in teams as a core method of practice; they then share their ideas with other teams. Quality programs for teachers have been emphasised that integrate the importance of research for practice. Further, the use of student learning contracts, grouping of students in different academic levels, intensified contact with parents, career guidance education (including internships for Grade 8 students), and a shift to individual support for students, have all contributed to Germany's improved educational outcomes.¹³¹

Leadership

Germany has a decentralised education system with responsibilities shared between the federal government and the 16 Länder. A dual system offers students both vocational and academic education. Schooling decisions are mainly made at the Länder level, while vocational education and training is a joint responsibility between the Federation and the Länder.¹³²

Following the 2000 PISA results, a number of programs have been introduced to support leadership improvement. The Responsible Schools program, piloted in the state of Rhineland, led innovation and gave greater autonomy to school heads with a focus on instructional leadership, increasing leadership autonomy within a collaborative culture. However, schools appear to have less discretion and control over the way they deliver services to students than other leading countries.¹³³

The Quality Analysis program (2007) aimed to ensure quality in schools. It includes six indicators: results of the school; teaching and learning; school culture; leadership and management; professionalism of teaching staff; and objectives of quality development.¹³⁴

In 2008, subject-specific and content requirements were implemented and were followed by a national Local Learning policy (2009), supporting local governments in building capacities for educational monitoring and data-based education management. Evaluation and assessment frameworks for external school evaluation and school self-evaluation were initiated. The German Qualifications Framework (2013) aimed to create measures for assessment and comparability of German qualifications. More recently, national efforts are being made to support school improvement through the Quality Offensive in Teacher Training (2014–2023), which seeks to achieve sustainable improvement in the process of teacher training (including career entry and further learning). The policy also aims to contribute to an expanded recognition of course achievements and certificates throughout the country, offering more flexibility to students and teaching postgraduates.¹³⁵

¹²⁸ Ibid.

¹²⁹ J Clinton et.al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

¹³⁰ Ibid., p. 12.

¹³¹ OECD, 'Strong performers and successful reformers in education: Germany', EDUSKILLS webinar, op. cit.

¹³² OECD, *Education Policy Outlook: Germany*, op. cit., p. 4.

¹³³ OECD, 'Strong performers and successful reformers in education: Germany', EDUSKILLS webinar, op. cit.

¹³⁴ OECD, *Education Policy Outlook: Germany*, op. cit., p. 12.

¹³⁵ Ibid., p. 4.

Union support for the reforms was gained by the government's agreement that student performance data would not be used in accountability systems. Teachers also agreed to the extended school day without a comparable increase in school pay, which guaranteed the continued high standing of teachers among the public and the right to participate in education policy making.¹³⁶

Germany's strong school performance has been attributed to: the changes it has made to the structure of its secondary schools; the high quality of its teachers; the values of its dual system—which helps develop workplace skills in children before they leave school; the development of common standards, curricula; and the assessment and research capacity to monitor them. Two key challenges confronting Germany are: firstly, ensuring high-quality teaching supports students with disadvantaged and migrant backgrounds and mitigates the impact of socio-economic background on student outcomes; and secondly, succession planning given the ageing of the teaching population.¹³⁷

Canada

Transparency

Canada comprises ten provinces and three territories. Provincial/territorial education authorities represent the highest level of educational authority in Canada, as there is no federal or central department of education. There are differences in policy frameworks for evaluation, teacher appraisal and assessment across provinces and territories.¹³⁸ However, Canada demonstrates, rather surprisingly, that success can be achieved without a national strategy. The best explanation for this is that different jurisdictions tend to blend in with one another, as the power of ideas and the possibilities of diffusion can be sufficient to generate good practice.¹³⁹

Canada was among the top performers in the PISA 2015 league tables. Results indicate nearly 90 per cent of Canadian students performed at or above Level 2 in science—a greater percentage than students across the OECD. Students scored well above average in mathematics, outperformed by only six countries among the 72 PISA-participating nations. In reading, students scored well above the OECD average, and were outperformed by only one country (Singapore). Canada also achieved high levels of performance and greater equity in education outcomes in the 2015 PISA results. At the national level and in most provinces, results in science, mathematics and reading have remained relatively stable since 2009.¹⁴⁰

Although there is no single agency responsible for evaluation and assessment of the education system as a whole, assessment is a key component of each province and territorial education system and a key area of collaboration through the Council of Ministers of Education, Canada. The council is involved in the design, implementation and analysis of both pan-Canadian and international assessment programs, as well as other studies, to examine educational environments and their outcomes.¹⁴¹

In most provinces, system evaluation is aligned with school evaluation. School or district boards have responsibility for evaluating their jurisdiction and reposting results to the provincial or territorial minister each year. The pan-Canadian Assessment Program (a cyclical assessment in mathematics, science and reading given to Grade 8 students since 2007) is used to evaluate the curriculum and to improve local assessment tools.¹⁴² (In this paper, examples from three of the 13 Canadian jurisdictions—Ontario, Alberta and British Columbia—are provided).

¹³⁶ OECD, 'Germany: Once weak international standing prompts strong nation-wide reforms for rapid improvement', op. cit.

¹³⁷ OECD, *Education Policy Outlook: Germany*, April 2014, p. 4.

¹³⁸ OECD, *Reviews of evaluation and assessment in education. Synergies for better learning. An international perspective on evaluation and assessment*, OECD publishing, Paris, 2013, pp. 271–382. (Notes section).

¹³⁹ OECD, 'Ontario, Canada: Reform to support high achievement in a diverse context', *Strong performers and successful reformers in education: lesson from PISA for the United States*, OECD Publishing, 2011, p. 77.

¹⁴⁰ Council of Ministers of Education (Canada), 'Measuring up: Canadian results of the OECD PISA Study. 2015 First results for Canadians Aged 15', 2016, p. 43.

¹⁴¹ OECD, *Education Policy Outlook: Canada*, January 2015, p. 12.

¹⁴² *Ibid.*

In Ontario province, for example, where systems have been consistently clear about their aims and targets relating to student performance over a substantial period of time, there appears to be greater acceptance and transparency of tracking student assessment data and system, school and classroom targets. Supporting a culture of student assessment is critical. In Ontario, student performance on the provincial assessments is considered important. The provincial government's response to weak performance has consistently been intervention, technical assistance and support. This approach has meant teachers take more responsibility for performance.¹⁴³ Research is embedded in all strategies. The Every Child Can Learn strategy—a framework for Ontario early childhood settings—saw the introduction of early intervention and student success teams to monitor student progress. These teams aim to improve student success with one-to-one support for low performing students to assist their learning. While students are tracked by ability from age 8 to age 15, there is a strong focus on students at most risk of failure through the Student Success Initiative.¹⁴⁴

Professionalisation

Teaching has historically been a respected profession in Canada, and continues to draw its candidates from the top third of secondary school graduates. Teaching is viewed as an attractive lifelong career with generous resource allocations for salaries, training and professional learning. In Canada, teacher education is selective. Teachers have at least a bachelor's degree and one year of pre-service teacher training which includes teaching practicums. Fewer than half the aspiring candidates are accepted into programs in the provinces of Alberta and Ontario. Criteria for entrance into university teacher education in Ontario, for example, usually includes academic standards, evidence of competencies, evaluation of teaching statements, discussions about experiences with children and evidence of teaching. At a national level, in order to increase diversity in the teacher population, teacher candidates who bring knowledge of First Nation issues and connections with First Nation communities are a priority.¹⁴⁵

In Alberta province, teachers are amongst the highest paid of all professions; in the province of Ontario, teachers are very well paid and can increase their salaries by earning master's degrees or completing additional qualifications. Also, in Ontario, the government covers about 60 per cent of the cost of the candidates' preparation. Teachers have heavier teaching workloads than in other OECD countries, with more teaching time at both primary and secondary levels.¹⁴⁶

There is strong teacher preparation and induction. The provinces set standards for the teaching profession. In addition to technical knowledge and skills, these standards treat teachers' moral and ethical commitments to students and their learning—and by extension, to teachers' own ongoing reflection and learning—so that they can always improve their ability to meet students needs. The standards are also used to guide professional growth;¹⁴⁷ and have also been coupled with teacher licensing. In Ontario, for example, a key function of teacher licensing is to provide assurance that teachers have met a threshold level of preparation from an approved education provider. In Alberta, teachers receive interim credentials for up to three years on the successful completion of a teacher education program that meets quality standards, while movement to permanent professional certification requires the recommendation of a school authority following two years of successful teaching.¹⁴⁸

Teacher appraisal processes in Canada vary across jurisdictions. In Ontario, the Teacher Performance Appraisal System provides a national framework for teacher evaluation to be implemented by each school's principal. Standards of practice for the teaching profession set by the Ontario College of Teachers describe what is expected of teachers and provide a structure for teacher evaluation which

¹⁴³ McKinsey, *How the world's most improved school systems keep getting better*, op. cit., p. 43.

¹⁴⁴ OECD, 'Strong performers and successful reformers in education: Canada', EDUSKILLS Webinar, OECD. Retrieved from oecd.org, accessed 1 February 2018.

¹⁴⁵ Darling Hammond, *Empowering Educators*, op. cit., p. 59.

¹⁴⁶ *Ibid.*, p. 51.

¹⁴⁷ *Ibid.*, p. 64.

¹⁴⁸ *Ibid.*, p. 218.

must feature a pre-observation meeting, classroom observation, a post observation meeting and a summative report that includes a rating of the teacher's overall performance. Student outcomes and survey ratings may also be used and self-assessment is recommended. The evaluation process is both summative and formative in nature. Feedback is provided to teachers in written and verbal form.¹⁴⁹

In Ontario, teacher federations and school boards are funded to support teacher professional learning. Incentives for professional learning also include a salary structure that rewards teachers for additional qualifications. School boards and schools initiate and lead a range of professional learning connected to local needs. Other examples include classroom observation of practicing teachers; book study groups; lunch and learn mini workshops; a variety of school-based communities of practice; and professional learning groups.¹⁵⁰

In British Columbia, there is no systematic framework for teacher evaluation; however, evaluations are a common feature of collective agreements between teacher unions and schools. There is a large degree of variation in the requirements and outcomes following evaluations between each school district. Generally, principals conduct evaluations with a high degree of control over the tools and methods. The Standards for Teaching are set out by the British Columbia Teaching Council; however, the role of these standards is not clear. Direct observation and self-assessment are mentioned in some teacher union—school agreements as tools for evaluation; however, clear guidelines are not given and the choice of evaluation tools is left up to each agreement. Evaluations appear to be formative with written and verbal feedback provided. Some evaluation results may be seen to be summative with teachers given a rating of satisfactory or unsatisfactory.¹⁵¹

In British Columbia, like Singapore and other high-performing systems, learning communities are a cornerstone program for effective professional learning. Each system moves through the key stages of the improvement cycle to ensure their professional learning communities meet the needs of the teachers and students. From the assessment stage of collecting evidence and data on student learning, to developing new practices, this cycle is the common element running through each system. The rise of collaborative learning communities has been slow but steady in British Columbia since 2000. The communities are now the main avenue for professional learning in many districts across the province. Teachers work in inquiry-based teams throughout the year, generally comprising three to seven teachers from the same subject or grade. Inquiry groups follow the Spiral of Inquiry model to collect evidence on student learning, pinpoint a specific improvement area and research and implement a new teaching practice. During this process, teachers constantly collect data on student learning to gauge where instructional changes are working and where they are not. Teachers give each other feedback through lesson observation or co-teaching while implementing new practices.¹⁵² More typically, evaluations are used for summative purposes (at the end of probationary periods and for hire of new teachers) and for regular appraisal (performance management for experienced teachers to identify and address performance concerns, as well as appraisal to support professional development).¹⁵³

Responsibility for the professional development of teachers is shared among provincial authorities, school boards, universities, teachers' associations and unions. District leaders in British Columbia hold school leaders accountable for the quality of professional learning in their schools. Huge advances have been made here with only 1–2 periods per week allocated to professional learning. Even this modest increase has enabled much more professional learning within and between classes during the school week.¹⁵⁴ Canada's framework for professional development was developed by the

¹⁴⁹ J Clinton et.al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

¹⁵⁰ Darling Hammond, *Empowering Educators*, op. cit., p. 105–148.

¹⁵¹ Ibid.

¹⁵² Jensen, *Beyond PD*, op. cit., p. 37.

¹⁵³ OECD, *Education Policy Outlook: Canada*, op. cit., p. 12.

¹⁵⁴ Jensen, *Beyond PD*, op. cit., p. 47.

Alberta Teachers' Association and guarantees follow-up after professional development sessions to apply, adjust and use what was learnt in the classroom.¹⁵⁵

Leadership

Education is decentralised in Canada. In each of the thirteen jurisdictions, one or two ministries or departments are responsible for the organisation, delivery and assessment of the education system. Since 2000, Canada has become a world leader in its sustained strategy of the professionally driven reform of its education system. The nation has achieved success with a highly federated system that features significant diversity, particularly with respect to issues of language and country of origin. With clear aims of investing in skills and education, their goals have focused on raising student achievement and improving graduation rates for secondary students given the significant student diversity (forty per cent immigrants).¹⁵⁶

Decision-making is entrusted to school boards and the level of authority delegated is at the discretion of the provincial government. Education on First Nation reserves is delivered by First Nation representatives with funding assistance from the federal government.¹⁵⁷ Canadian policy makers have established a commitment to strengthening and integrating Indigenous histories, cultures and perspectives through curricula, initial teacher education and professional learning.¹⁵⁸

In PISA 2012, school leaders in Canada reported a higher level of instructional leadership than the OECD average. At the same time, school leaders reported that their schools have less autonomy than the OECD average for allocating resources—for example, appointing and dismissing teachers and formulating school budgets and allocating them within the school. They also reported less autonomy than the OECD average for curriculum and assessment—for example, establishing student assessment policies, choosing which textbooks are used, determining course content and deciding which courses are offered—as these are often school board responsibilities.¹⁵⁹

Ontario's decision to work with a strong teacher federation, as opposed to mandate reforms, culminated in union-funded professional learning. Mandating reforms was minimised by cultivating school-led innovation and improvement and by building on professionals' ideas and empowering educators. The introduction of a new leadership drive to improve literacy and numeracy and the tracking of student learning data regularly to assess progress and direct support (Ontario 2003) has enabled leadership sustainability by grooming future leadership within ranks. In addition, the 2008 Ontario Leadership Strategy gave special attention to leadership development, and incorporated a strong mentoring programme and an appraisal program for school leaders. Ontario has paid special attention to leadership development, especially for school principals. The Ontario Leadership Strategy outlined the skills, knowledge and attributes of effective leaders. Among the elements of the strategy are: a strong mentoring program that has now reached over 4000 principals and vice principals; and a new province-wide appraisal program for school leaders.¹⁶⁰

Future challenges for Canada include the dual test of having the appropriate number of well-trained teachers where they are most needed and of providing support and guidance to schools. It will be important to also continue efforts to set priorities that build on and are aligned to the decentralised system approach.¹⁶¹

Conclusion

The literature review has illustrated a multitude of interventions with regard to effective teacher performance and development policy implementation. While there is no evidence of a 'one-size-fits-all' solution to performance and development reform, there are critical interventions, common to

¹⁵⁵ J Clinton et al., *Teacher effectiveness systems, frameworks and measures: A review*, op. cit.

¹⁵⁶ OECD, 'Strong performers and successful reformers in education: Canada', op. cit.

¹⁵⁷ OECD, *Education Policy Outlook: Canada*, op. cit., p. 4.

¹⁵⁸ Darling Hammond, *Empowering Educators*, op. cit., p. 229.

¹⁵⁹ OECD, *Education Policy Outlook: Canada*, op. cit., p. 10.

¹⁶⁰ OECD, 'Ontario, Canada: Reform to support high achievement in a diverse context' in *Strong performers and successful reformers in education: lesson from PISA for the United States*, OECD Publishing, 2010, pp. 74–76.

¹⁶¹ OECD, *Education Policy Outlook: Canada*, op. cit., p. 4.

successful systems, that bring improvement over time and that need to be effectively managed in respective contexts.

The key interventions have been illustrated through three themes: transparency, professionalisation and leadership. Participation in international, regional and national assessments for many countries has delivered a certain transparency of educational outcomes. Governments and policy makers realise that measuring, evaluating and developing teacher quality and effectiveness is key to improving educational outcomes for students. The development of national curricula, student performance standards, national teaching standards and greater responsibilities associated with teacher professional development (including career pathways) has hastened the professionalisation of the teaching workforce. Further, a focus on the development of school leaders, with greater accountability and instructional roles, seeks to improve the management of teacher performance and development and sustain educational reforms.

The literature review has illustrated the effectiveness of the interventions across high-performing education systems around the world, albeit in their own unique contexts and at their own pace. Systems—such as those in Finland, Singapore, Canada and Germany—have shown that implementing structures and measures to ensure transparency of educational outcomes, along with efforts to improve the professionalisation of the workforce and improve the quality and effectiveness of teaching, can dramatically improve student outcomes at both school and system levels.

It is concerning that Australia lags behind the best education systems in the world, with the average 15-year-old in Australia 1–2 years behind the average 15-year-old in Singapore in mathematics, and 6–12 months behind in science and reading. For some student cohorts, such as Indigenous Australians, student outcomes are significantly worse than the average for OECD countries.¹⁶² This finding overlays national teaching workforce data that indicates 5.7 per cent of teachers are leaving the profession in any year.¹⁶³ It is also understood that a range of issues within a school (relating to professional skills and training, relationships and cultures), personal factors and structural issues (such as employment conditions) combine to influence retention and attrition.¹⁶⁴

A torrent of reports, seeking to influence the Australian school landscape to address underlying issues, have called for:

- teacher appraisal to become more systematic; more opportunities for feedback and greater alignment across teaching standards, and registration processes and career structures¹⁶⁵
- ways to maximise investment in Australian schools¹⁶⁶
- evidence-based research to guide innovation and implementation of reforms¹⁶⁷
- educational imperatives for accelerating productivity¹⁶⁸
- a review of teacher registration¹⁶⁹ and
- further recommendations to invest in the professional development of Australian teachers and leaders (given nearly 40 per cent of Australia’s maths teachers do not have a mathematics degree).¹⁷⁰

¹⁶² Australian Government, *Innovation and Science 2017*, op. cit.

¹⁶³ Australian Institute for Teaching and School Leadership, ‘What do we know about early career teacher attrition rates in Australia?’, *Spotlight*, 2016, p. 8.

¹⁶⁴ S Mason and M Poyatos, ‘Teacher attrition and retention research in Australia: Towards a new theoretical framework’, *Australian Journal of Teacher Education*, 40(11), 2013, pp. 45–66.

¹⁶⁵ OECD, *OECD Reviews of evaluation and assessment in education: Australia*, OECD publishing, Paris, 2011.

¹⁶⁶ Australian Government, *Senate report into teaching and learning*, Canberra, 2013.

¹⁶⁷ Productivity Commission, *Shifting the Dial: 5 year Productivity Review*, Report No. 84, Canberra, 2017.

¹⁶⁸ Australian Government, *Innovation and Science Australia 2017*, op. cit., p.27.

¹⁶⁹ In 2018, the Turnbull Government, with the support of states and territories, launched a national review of teacher registration to help tackle the key inconsistencies in systems across the country. The review would focus on the registration of early-childhood teachers, vocational education and training teachers in schools as well as how new teachers transition into the profession.

¹⁷⁰ Australian Government, *Innovation and Science Australia 2017*, op. cit., p. 27.

In March 2017, the then federal Minister for Education and Training, Simon Birmingham, stated ‘it is critical to continue lifting the quality and professionalisation of teaching’. Quoting from a report on teacher effectiveness, Birmingham continued ‘current Australian evaluation systems appear to add little value to the enhancement of teaching practice, despite some recent support to develop career pathways for teachers’. He added, ‘Australia has a good foundation with which to build this capacity, based on our teaching standards, the certification process and the Australian Institute of Teaching and School Leadership’s track record of delivery’.¹⁷¹

The release of the *Review to Achieve Educational Excellence in Australian Schools* (Gonski 2.0) included a key recommendation with critical implications for teacher performance and development in Australian schools.¹⁷² The review signals the need for educational systems and schools to:

- create the conditions and culture to enable more professional collaboration, observation, feedback and mentoring
- provide teachers with high quality professional learning
- develop a national teacher workforce strategy
- implement effective induction practices for early career teachers and
- create meaningful career pathways; which value and utilise teaching expertise and keep excellent teachers teaching.

It is worth noting that the framework for some of these recommendations has already been implemented by the Australian Institute for Teaching and School Leadership. Clearly, the recommendations reflect the thematic shifts toward transparency, professionalisation and leadership implicit in the international evidence-based research—a point also underlined by the former federal Minister for Education and Training Simon Birmingham recently when he acknowledged, ‘we are working on an evidence-based school reform agenda to ensure our record and growing funding is used to boost student outcomes’.¹⁷³

There is clear impetus to continue to develop and transform teacher performance and development in Australia. The evidence-based recommendations emanating from recent reports, together with the knowledge of what underpins effective performance and development frameworks in international contexts—as highlighted in this literature review— must now be considered and utilised effectively to strengthen teacher performance and development in Australia. More research, however, will be required on the implementation and impacts of teacher performance and development frameworks in the Australian context to continually monitor the policy effectiveness, and to identify any gaps between policy and practice.

¹⁷¹ S Birmingham (Minister for Education and Training), Speech to Australian Institute for Teaching and School Leadership Highly Accomplished and Lead Teacher Summit, Sydney, transcript, 17 March 2017, accessed 29 January 2018.

¹⁷² Australian Government, *Through Growth to Achievement: The Report of the review to achieve educational excellence in Australian schools*, March 2018, accessed 10 July 2018.

¹⁷³ S Birmingham, ‘At last, a fair and sustainable model for school funding’, *The Australian*, 12 July, 2018, p. 12, accessed 12 July 2018.

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