
Performance management of teachers¹

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In May 2012, the Productivity Commission published an analysis of teacher performance management in Australian schools as part of its broader study of the need for reform of the Australian schools workforce. The study found that most teachers were not receiving the feedback and support they needed to become better teachers and that ongoing unsatisfactory performance rarely led to disciplinary action or dismissal. The Commission recommended that schools be required to maintain an effective performance appraisal system and be given the necessary resources, training and ongoing guidance to do so. This would be more effective if principals and teachers are given a major role in determining how appraisals are undertaken in their school and if a range of school-based indicators and criteria are used. The Commission also recommended that principals of government schools be given the authority to take disciplinary action when there is ongoing unsatisfactory performance, provided they have the necessary leadership skills and other resources to undertake this role. The long history of mixed results from experiments with teacher bonuses suggests that an effective and widely-applicable bonus payment system is unlikely to be developed in the foreseeable future.

1. Introduction

This paper is based on a study of the need for reform of the Australian schools workforce that the Productivity Commission published in May 2012 (PC 2012), with some updating to reflect more recent developments.

The Australian Government does not operate the schools in Australia, but does provide funding support. Australian teachers and other school workers are employed by State and Territory governments, Catholic education offices and independent school operators in a diversity of environments. In 2012, Australia had 9427 schools, 71 per cent of which were government schools, 18 per cent Catholic, and 11 per cent

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independent (including some run by other religious organisations) (ABS 2013). On a full-time equivalent basis, the paid workforce included almost 260 000 teaching staff, principals and other school leaders (table 1), and more than 80 000 teaching assistants and administrative staff.

Table 1 **Number of teaching staff, 2012^a**

	<i>Primary</i>	<i>Secondary</i>	<i>Total</i>
Government	93 903	73 249	167 152
Non-government	39 887	51 947	91 834
Total	133 790	125 196	258 986

^a Full-time equivalent number of teachers, principals and deputy principals in August 2012.

Source: ABS (*Schools: Australia, 2012*, Cat. no. 4221.0).

The Commission found that Australian schools generally deliver good student outcomes at reasonable cost, but improvements were required. Student literacy and numeracy has been declining, and Australia has fallen behind other high-performing countries.

A key element of the Commission's recommended reforms was to raise teacher quality by improving the:

- training of new teachers
- procedures for the induction of new teachers into the school environment
- mentoring of teachers in their early careers
- performance management of teachers.

This paper focuses on the findings of the study in relation to the fourth of these issues: the performance management of teachers. A performance management system can have various components. The study concentrated on the appraisal procedures used to provide regular feedback to teachers on their performance, the means by which unsatisfactory performance is managed, and the use of remuneration to encourage high performance. These areas of concern were also raised by interested parties in consultations and written submissions.

2. The case for improving teacher appraisal

Empirical research shows that, for a given student, the effectiveness of their schooling outcomes primarily depends on what their teachers know and do (Hattie 2009;

OECD 2009b). The research also confirms (as every student, parent and principal knows), that there is marked variation in teacher effectiveness (AITSL 2011c; Podgursky 2009).

Better teacher appraisal could be an important element of a performance management system that encourages and supports teachers to become more effective. The Commission found that, while a majority of Australian schools could claim to have an appraisal system, the actual procedures were often of a poor quality, and many teachers were not receiving the feedback and support they needed to become better teachers.

A survey of lower-secondary teachers by the OECD (2009a) quantified the problem. It showed that around 60 per cent of Australian teachers surveyed in 2007-08 thought that appraisals were largely undertaken to fulfil administrative requirements, and had little impact on the way they teach. Around 70 per cent thought that a teacher would not be dismissed in their school for sustained poor performance, and about 90 per cent of surveyed teachers did not think that they would receive any recognition for improving the quality of their teaching.

In a submission to the Commission's study, the Australian Government Department of Education, Employment and Workplace Relations (DEEWR 2011, p. 20) noted that 'teacher evaluation needs to be more systematic and meaningful and provide a better indication of where teachers are at in relation to career progression'. Similar concerns have been raised in various other reviews (DEEWR 2010; Jensen 2011; Nexus Strategic Solutions 2009; Santiago et al. 2011).

In 2009 the Australian, State and Territory Governments agreed to a National Partnership Agreement on Improving Teacher Quality. Among other things, this provided financial incentives to establish or improve performance management systems and to pay a wider range of wages to teachers to recognise differences in the quality of their teaching. However, at the time when the Commission wrote its study report, the national partnership had only led to relatively minor changes in the actual performance appraisal systems that were being used at the school level.

Three months after the Commission's report was released, the governments collectively agreed to implement an Australian Teacher Performance and Development Framework (ATPDF) that had been developed by a government organisation, the Australian Institute for Teaching and School Leadership (AITSL 2012). The Framework provides broad guidance on the critical factors for creating a performance and development culture in schools. On teacher appraisal, the ATPDF recommended that schools use the National Professional Standards for Teachers as a guide to what teachers are expected to know and do. More generally,

the ATPDF provided similar advice on teacher appraisal to that in the Commission's report, which is summarised in the next section.

3. How to improve teacher appraisal

Tailor arrangements to individual schools

The Commission considered that a top-down approach, whereby central education agencies in each State and Territory sought to impose a one-size-fits-all model of teacher appraisal on all of their schools, would be inappropriate because there is considerable diversity of schools and education needs within each jurisdiction. Instead, while central agencies of governments could establish appraisal frameworks, as set out below, principals and teachers should have a major role in determining how performance management is tailored to the circumstances of their school. Indeed, without their input it is likely that many teachers would continue to perceive performance management as a bureaucratic requirement imposed from above.

An important role for central education agencies — particularly State and Territory education departments and Catholic education offices — is to support the reform of teacher appraisal in their systems by:

- providing schools with broad guidelines and templates
- requiring the schools they oversee to develop and maintain effective localised appraisal systems for teachers
- providing schools with sufficient resources to maintain effective appraisal systems, performance appraisal training, and guidance on performance measures and data management
- monitoring the effectiveness of performance appraisal, rather than just monitoring compliance with specific processes.

The central agencies need to adopt a more systematic approach to performance measurement and data management to be able to monitor the effectiveness of the individual schools' performance management systems. The central agencies could also undertake more regular and/or targeted surveys of teachers to determine whether the teachers are receiving useful feedback and support to become better at teaching. This monitoring would be part of a clear and transparent framework which specified when the central agency would intervene and what form the intervention would take.

There are a number of professional organisations that support the development of teachers. However, those organisations do not typically play a direct role in working

with, or reviewing, locally managed performance management processes within a framework established by the relevant government authority.

Allocate sufficient time and resources

The resources devoted to performance appraisal are key determinants of the effectiveness of the appraisal system. This includes funding for a sufficient number of performance assessors (usually senior teachers) who can provide professionally sound advice and feedback to teachers to improve their performance, and providing support to teachers to understand appraisal procedures and to benefit from the evaluation results (Santiago et al. 2011). Moreover, adequate resources are needed to follow up appraisals with structured professional development activities.

Although the cost of conducting appraisals and professional development is often a large hurdle, another barrier can be in allocating sufficient staff time (for assessors and teachers) to prepare for, and undertake, appraisals, as well as to be released from teaching duties to undertake follow-up professional development.

The effectiveness of performance management is also very dependent on the availability and capacity of leadership and management within schools. The OECD observed that Australian school principals generally seem to not have the time to engage properly in the coaching, monitoring, and appraisal of teachers (Santiago et al. 2011).

Although there are costs associated with a well-functioning performance appraisal system, these need to be assessed against the benefits of more effective teaching, improved student development, greater future workforce productivity and the better functioning of society more generally.

Use school-based indicators and criteria

The assessment of teacher performance must be based on a defined set of standards that specify the characteristics of quality teaching (Mancera and Schmelkes 2010). In Australia, schools have increasingly used teaching standards as a framework for performance appraisals (Ingvarson et al. 2008). Historically, these standards have differed between jurisdictions. The recent development of the National Professional Standards for Teachers has provided a basis for jurisdictions to converge on a single broad framework for performance assessment.

However, standards are not by themselves sufficient for performance appraisal because they usually only describe what teachers are expected to know and be able to do, rather than specifying practical and valid measures of performance (Gerard

Daniels Consulting 2009). Thus, schools should use teaching standards as a reference point, but supplement them with school-based indicators and criteria (Santiago et al. 2011). For example, one of the national standards in Australia is that teachers:

Select and use relevant teaching strategies to develop knowledge, skills, problem solving and critical and creative thinking. (Standard 3.1 of Australia's National Professional Standards for Teachers, AITSL 2011b)

Potential indicators that could be used to assess this include student test scores and the observation of classroom practices by the school principal or a delegated senior teacher who reports on the observations to the teacher and the principal.

There would be a greater likelihood of meeting the above standard if principals regularly reviewed the teaching plans of individual teachers. This could be part of the formal process of establishing performance expectations prior to appraisal, which is a key element of the ATPDF. It would also be consistent with the Australian Professional Standard for Principals, which requires principals to lead teaching and learning (AITSL 2011a). Where appropriate, the review of a teaching plan could also be part of post-appraisal support to raise performance to the required standard.

Use more than one method to gather evidence

There is a general consensus in the literature that appraisals must be based on one or more sources of evidence given that no single approach adequately captures the various dimensions of teacher performance (Ingvarson et al. 2008; OECD 2011a).

There are many potential ways to gather evidence (box 1). While it would be impractical to use all of them, schools can draw on an increasing body of literature that reports on the pros and cons of different methods and on particular suites of measures that have been found to be valuable (for example, Jensen 2011).

Box 1 Methods of gathering evidence for teacher appraisals

Many different methods can be used to gather evidence for teacher appraisals, including:

- indicators of student learning, such as test scores and samples of student work
- observation of classroom practices by the principal, a peer, or an external party (such as a principal or leading teacher from another school)
- a portfolio showing examples of the teacher's recent work
- surveys of students and/or parents
- evidence of teamwork with colleagues
- teacher interviews
- tests of teacher knowledge
- teacher self-evaluation
- evidence of professional development.

There is a consensus in the literature that more than one method should be used because no single approach can adequately capture the various dimensions of teacher performance. For example, classroom observations can provide insights that are not revealed in standardised tests, which often only cover specific subjects taught by a subset of teachers (OECD 2011a).

Another reason to use evidence from more than one source is that principals, teachers, peers, parents, students and external parties do not value the same teaching capacities and knowledge, do not refer to the same collection of evidence, and have different perceptions and degrees of objectivity (Isoré 2009). For example, studies indicate that principals are particularly effective at identifying the very best and worst teachers, but have less ability to distinguish between teachers within those extremes. External reviewers can assess teachers relative to system-wide professional standards and know the specific content and skills for each teaching area, but are less able to understand the school context, problems and values.

Whatever the evidence used, principals have a responsibility to ensure that individual appraisals are undertaken, with this responsibility possibly delegated to a senior teacher, as is currently the common practice in Australia (Jensen 2011; Santiago et al. 2011). This ensures that appraisals take account of local circumstances, while making it clear to principals that they are accountable for performance management in their school.

Use a measure of student outcomes

The appropriate weight to give to student outcomes when measuring the quality of teaching practice is the subject of ongoing debate, partly reflecting concerns about measurement issues.

The term ‘student outcome’ can have a range of meanings. The most basic is student attendance and retention rates, and the most common is academic achievement. But there are other important student outcomes. They include personal fulfilment and wellbeing, interpersonal or social relationships, various types of participation in and contributions to school and general community life and career opportunities.

Student outcome measures are often based on standardised tests of academic achievement and only cover a subset of subjects and students. Further, such measures do not clearly identify the specific contribution of the current teacher. The OECD (2009b) has noted that standardised tests have gained popularity in the United States. However, most teachers do not instruct in a tested grade or subject and the tests capture only a fraction of the contribution that teachers have the potential to add to student outcomes.

Similar criticisms have been directed at the use of standardised test scores in Australia, including in relation to the National Assessment Program — Literacy and Numeracy (NAPLAN). While NAPLAN is a positive development and its coverage of grades and subjects is significant, it does not, and cannot be expected to, cover the wider perspective of performance for every student (let alone the contribution to that performance by the current teacher).²

The partial nature of student tests has raised concerns that they encourage teachers to focus solely on improving what is measured (and measurable) even if this comes at the expense of other important aspects of schooling (Isoré 2009; Neal 2009; OECD 2009b). The issue of managing according to what is measured and rewarded is a common concern about performance management across all areas of employment.

The reliance on test scores may also create an incentive for teachers to avoid certain schools and shift their efforts to students who are most likely to maximise the teacher’s chances of earning a reward — such as students who are close to a pass mark — at the expense of those who are behind or ahead (Isoré 2009; Neal 2011). Isoré (2009) also noted that relying on student tests may reward cheating by giving teachers an incentive to provide students with test questions and answers in advance.

The education research literature also shows that a large proportion of the variance in student outcomes is due to factors not controlled by a teacher, such as students’ ability and socioeconomic background. A sound appraisal system for the performance of

² NAPLAN involves annual tests of numeracy, reading, writing and language conventions (spelling, grammar and punctuation) for all students in years 3, 5, 7 and 9 on the same days using national tests.

teachers would focus, instead, on the outcomes achieved by students that are attributable to a teacher.

High-quality teachers can have an impact on student achievement for several years after having taught them. This has led to interest in using statistical methods to isolate the impact that current teachers have on test scores. This involves the use of ‘value-added’ models that seek to control for the effects of non-teacher factors and past teaching.

It is not yet common practice for education systems to use value-added models as part of performance management, but they are used in a small number of countries that have many years of experience in standardised student assessments, particularly the United Kingdom and United States (OECD 2011a).

At their current stage of development, it appears that value-added models are more appropriate for comparing schools rather than teachers, because existing data and models are not yet sufficiently robust to make valid comparisons at the teacher level (Isoré 2009; Jensen 2011; OECD 2009b).

The Commission has concluded that a measure of student outcomes should be used in teacher appraisals because of its importance. However, recognising the limitations of such a measure, it must only be used in combination with other evidence, including whether the teaching methods employed by teachers to achieve student outcomes are consistent with quality teaching, and an assessment of the knowledge and skills the teacher has acquired and their classroom practices. Feedback from peers, students and parents is also important.

4. Managing unsatisfactory performance

Unsatisfactory performance by a teacher has a direct adverse impact on their students, both at the time and on those student’s future lives. Further, tolerance of ongoing poor performance can foster a workplace culture that does not attract and retain quality teachers. In addition, poor performance represents a waste of public funds in employing a person who is not making an effective contribution to education.

It is therefore concerning that there appears to be a widespread perception in Australia, including among teachers, that it is rare for unsatisfactory teacher performance to be addressed. As noted previously, around 70 per cent of Australian lower-secondary teachers surveyed by the OECD in 2007-08 thought that a teacher would not be dismissed in their school for sustained poor performance (OECD 2009a).

Very few teachers are ever officially deemed to be underperforming. The evidence, albeit somewhat dated, mainly comes from past reviews of government schools in New South Wales and Victoria.

- The Audit Office of New South Wales (2003) reported that, in 2001, only about 0.4 per cent of teachers in NSW government schools were subject to underperformance procedures. The Audit Office argued that it was difficult to accept that, among a workforce of over 40 000 employees, so few were performing poorly. More recently, the NSW Government reported that less than 30 teachers were dismissed for being inefficient in the three years from 2008 to 2010 (DEC (NSW) 2010).
- The Victorian Auditor General's Office (VAGO 2010) reported that, between 2004 and 2008, the Victorian education department initiated unsatisfactory performance procedures against only 61 teachers out of a workforce of around 37 000 classroom teachers. Earlier research by BCG (2003) estimated that only 0.15 per cent of teachers in Victorian government schools were rated as being unsatisfactory in their performance appraisal in a given year. In contrast, principals indicated in interviews with BCG that up to 20 per cent of teachers were 'significant underperformers'.

Jensen (2011) suggested that the limited use of procedures for managing underperformance may be explained by the absence of meaningful teacher appraisal and development standards and processes, making it difficult for employers to justify taking action against a teacher. This reinforces the case for improved teacher appraisal and feedback. Poor workplace culture, and/or a need for principals to have greater leadership skills and more support, could also explain the low use of underperformance procedures.

Another relevant factor appears to be the procedures that education departments require government schools to adhere to when seeking to remedy unsatisfactory performance. At the time of the Commission's study (2012), schools typically did not have the authority to dismiss a teacher or take other disciplinary action. The role of schools was essentially confined to providing a formal warning and a period of case management in which a teacher was required to remedy their underperformance. If the teacher failed to lift their performance to the accepted standard after being given reasonable time and support to do so, the school usually had to initiate a further process with the education department. This involved a written report submitted to a senior departmental official to decide what action to take. In New South Wales, this had to be preceded by a review of the school's actions by an independent panel to ensure that the required procedures were followed (DET (NSW) 2006).

The lack of authority delegated to government schools to take disciplinary action, combined with sometimes prescriptive and time-consuming procedures, will tend to discourage these schools from addressing cases of unsatisfactory teacher performance.

It will continue to be challenging to address unsatisfactory performance while much of the power to remedy sustained poor performance is retained by central agencies that do not directly observe teacher underperformance or bear the immediate consequences of inaction. Ideally, in the Commission's view, principals should be given the full range of performance management options to remedy problems as they arise, including ultimately to dismiss a teacher from their school if performance does not rise to the required standard after being given reasonable time and support to do so.

The 2010 Staff in Australia's Schools survey revealed that a large proportion of principals in government schools wanted more authority to dismiss teachers — 44 per cent in primary schools and 54 per cent in secondary schools (McKenzie et al. 2011). The equivalent proportions were lower in Catholic schools — 28 and 17 per cent — and in independent schools — 6 and 13 per cent (with such low results possibly reflecting the greater local autonomy that the principals of independent schools already have).

However, a pre-requisite for delegating authority to remedy teacher underperformance is that the relevant school principal and other senior managers have the necessary leadership skills and other resources. Where such delegation is not appropriate, there is scope for central agencies to review their own procedures so that they are less of a deterrent to addressing underperformance. The South Australian Government had taken a step in this direction by issuing a revised policy for managing unsatisfactory teacher performance that provides greater flexibility to intervene in a timely fashion (DECS (SA) 2011). Similarly, the Western Australian Government had made legislative changes to reduce some of the bureaucracy that previously surrounded the management of substandard performance.

5. Performance based remuneration

There has been considerable interest internationally in exploring alternative remuneration systems to more closely tie teacher rewards to performance. However, there has been little use of performance-based remuneration in Australian schools.

Pay increments for teachers who have yet to reach the top of the pay scale are notionally conditional on satisfactory performance. In practice, they are almost never

withheld. As a result, where teachers sit on the pay scale is largely determined by their length of service. This may be a reasonable proxy for the early career improvements in performance and student outcomes which, the research suggests, come with the experience gained in the first few years of teaching. However, rewarding performance beyond that associated with this initial accumulation of experience requires mechanisms other than current increment systems.

One option is the payment of performance bonuses. While they are rarely offered to Australian teachers, there is a long history of mixed results from the US and elsewhere (box 2). This suggests that an effective and widely-applicable bonus system is unlikely to emerge in Australia in the foreseeable future. Hence, efforts to improve teacher performance should not focus on the payment of bonuses.

Another approach, common in most Australian school systems, is the creation of advanced-skill teacher positions. These are a single higher-paid classification for more effective teachers which is subject to a competitive merit selection process. However, the resulting effect on student outcomes appears to be of limited benefit due to: the relatively small number of positions made available; the requirement that successful candidates take on non-teaching duties; and selection processes that are not necessarily linked directly to the contribution a teacher has made to improving student performance.

A potentially more beneficial option for performance-based remuneration is to create a performance based career path. Study participants noted that a career path already existed to some extent through the supplements that teachers can receive for taking on additional responsibilities, such as managing a department or coordinating a year level (both of which diminish the teaching time of the potentially higher performing teachers). As a result, many teachers already earn more than the top of the incremental salary scale. This is apparent from the 2010 Staff in Australia's Schools survey, in which almost 22 per cent of teachers in primary schools and 40 per cent of teachers in secondary schools reported that they earned more than A\$80 000 per annum (figure 1) (based on an examination of salary scales in a sample of school systems, it appears that the top of the incremental scale was typically around A\$80 000 in 2010).

Box 2 Empirical evidence on performance based pay for teachers

The evidence on teacher performance pay is mixed.

A number of studies have found no impact. For example, evaluations of a three-year trial of bonuses in New York schools found no improvement in student outcomes (Fryer 2011; Marsh et al. 2011). Similarly, Glazerman and Seifullah (2010) found no evidence of an increase in student test scores associated with a system of performance bonuses and more highly-paid positions in Chicago schools. A three-year trial of bonuses for maths teachers in Nashville did not yield consistent and lasting gains in student test scores (Springer, Ballou, Hamilton et al. 2010).

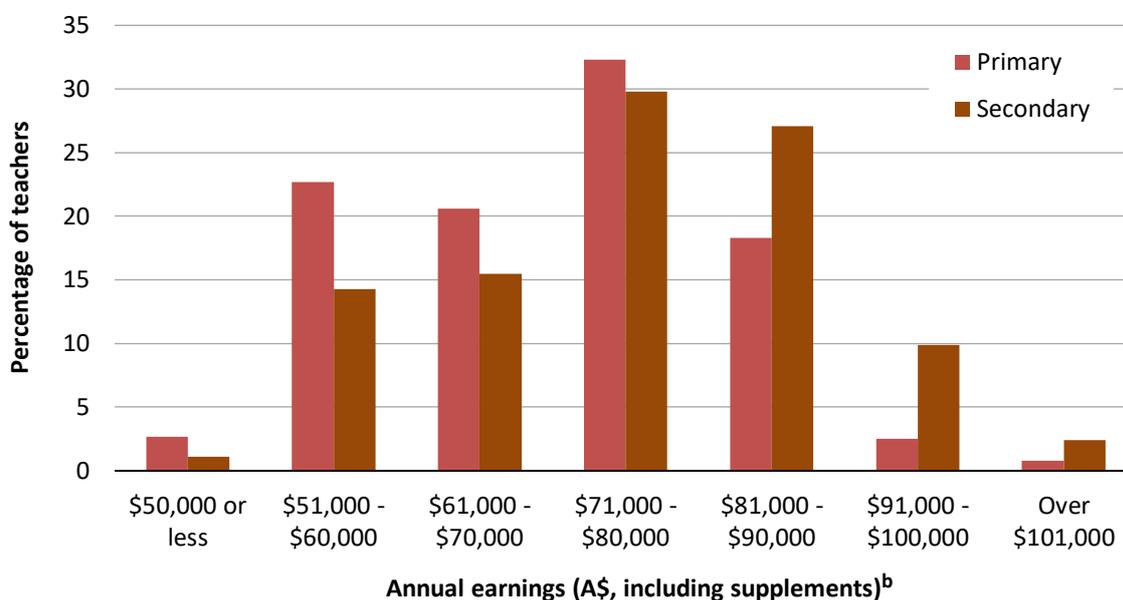
However, some studies have found a positive link between performance pay and student outcomes. Springer, Lewis, Eglert et al. (2010) found that an incentive-pay system operating in Texan schools since 2008 had a positive impact on student test scores. The Victorian Government (DEECD (Victoria) 2009) summarised a number of studies to support a trial of teacher bonuses in its schools (reproduced in the table below, with student outcomes based on standard tests of maths and languages).

Study	Country	School type	Average reward size (% salary)	Standard deviation improvement per annum
Winters et al. (2008)	US	Primary	5–20	0.15–0.22
Figlio and Kenny (2006)	US	High school	10–20	0.04–0.06
CTAC (2004)	US	High school	~2 per objective	0.03–0.08
Muralidharan & Sundararaman (2006)	India	Primary	~5	0.15
	India	Primary	~4	0.08
Angrist and Lavy (2004)	Israel	High school	1–2	0.1 (approx)
Lavy (2002)	Israel	Grades 10 & 12	6–25	0.2 (approx)

Such results must be interpreted with care. For example, Figlio and Kenny (2006) cautioned that the correlation they found between US teacher incentives and student test scores could be due to better schools being more likely to adopt teacher incentives, rather than being an outcome of the incentives themselves. Similarly, the OECD (2009b) warned that US evaluations are often positive, but must be considered in light of the voluntary participation. More robust evidence comes from a handful of randomised trials in India, Israel and Kenya, with the Indian and Israeli results being positive (Springer 2009). The relevance of the approaches and results to Australia needs to be treated with caution.

Thus, further research is required. Podgursky and Springer (2007) perhaps best summed up the situation as one where the empirical literature is not yet sufficiently robust to prescribe how systems are best designed, but it does make a persuasive case for further experimentation. This should include robust evaluation, preferably involving randomised trials with control groups of similar schools and teachers, and detailed data that measures the broader set of student outcomes, not just test scores.

Figure 1 Distribution of teacher earnings, 2010^a



^a Gross full-time equivalent earnings, including supplements for teachers in senior positions. Excludes principals, deputy principals and employer superannuation contributions. Data were collected from August to December 2010 as part of the Staff in Australia's Schools survey commissioned by the Australian Government Department of Education, Employment and Workplace Relations. ^b There is a A\$1000 gap between adjacent earnings ranges because teachers were asked to report an amount to the nearest thousand dollars.

Source: McKenzie et al. (2011).

Various participants in the Commission's study indicated interest in developing a more formal career path for teachers. The Commission suggested that this could have, as its foundation, the four career stages in the National Professional Standards for Teachers. Teachers would be assessed and, if found competent, would be certified accordingly, but this would not, of itself, result in a change to their salary. Separately, the staffing profiles of individual schools would include limited numbers of positions at the different career stages, with appropriate salaries. Principals would be able to amend profiles within overall staffing budgets to meet local needs. As vacancies arose, teachers certified at the relevant (or higher) level could apply. Selection would be on the basis of merit. The appointment could be time limited and/or subject to periodic review.

Importantly, the linking of a career structure to national teaching standards should only be considered after the integrity of the standards and assessment processes has been demonstrated. At the time of the Commission's study, it was too early to assess these standards and processes.

A range of implementation issues would also need to be dealt with, such as:

- how remuneration based on a career structure would operate in conjunction with incentives to attract teachers to hard-to-staff schools (such as in remote areas and in communities where violence is more prevalent) and hard to staff subject areas (such as mathematics and science)
- whether existing supplements for taking on additional managerial responsibilities, such as being the head of a department, would be retained
- whether the salaries of principals would have to be substantially increased to maintain their level relative to the best-paid teachers.

Another important consideration is that the cost of moving to a more formal career path for teachers, without any other changes to the workforce arrangements, could be substantial. Dinham, Ingvarson and Kleinhenz (2008) proposed a career structure similar to that suggested by the Commission. Based on existing teacher numbers, they envisaged an increase in annual salary costs of about 20 to 25 per cent, or around A\$4 billion in 2008 terms, when fully implemented (box 3).

Dinham, Ingvarson and Kleinhenz (2008) assumed that half of all teachers would be in the top two pay grades. An alternative, and potentially more cost-effective approach, would be to more tightly focus pay increases on the highest quality teachers. Their assumption of no change in the number of teachers could also be reconsidered, given that the proposed career structure is meant to raise workforce productivity, and hence open the possibility of improving student outcomes while also employing fewer teachers per student.

This would be a shift from past approaches to funding increases, which have tended to focus on reducing class sizes. International test results and Australian-specific work indicate that a reduction in class sizes has not been cost effective. The literacy and numeracy of Australian students has declined and Australia has fallen behind other high-performing countries despite a significant increase in real expenditure per student since the 1990s (Jensen et al. 2012; OECD 2010, 2011b).

A reduction in class sizes had been pursued partly on the presumption that, by enabling teachers to give more individual attention to each student, there would be better student outcomes. However, below a relatively high threshold level, both the Australian and international research suggests that the benefits of smaller class sizes is limited to some student groups, such as those with learning difficulties, disabilities or other special needs. While greater early intervention for students who were not performing at their potential is warranted, the across-the-board approach to class-size reductions in Australia has been a costly policy that has not translated into a commensurate improvement in overall student outcomes.

Box 3 ACER proposal for a standards-based career structure

In 2008, the Australian Council for Educational Research (ACER) prepared a report for the Business Council of Australia on how to raise the quality of teaching. One of the proposals was to introduce a standards-based career structure.

The paper was written prior to the release of the national teaching standards, but the system it envisaged was similar to what has eventuated. In particular, there would be four career stages, with the lowest two levels (graduate and proficient) being part of a mandatory regime of teacher education course accreditation and teacher registration, while certification at the highest two levels (accomplished and leading) would be voluntary.

The authors proposed that the salary for each career stage would be a multiple of that for beginning graduates — 1.25 times for proficient teachers, 2.0 for accomplished teachers, and 2.5 for leading teachers. It was expected to take around 10 years to move to a point where about 10 per cent of teachers were graduates, 40 per cent proficient, 30 per cent accomplished, and 20 per cent leading teachers.

In 2008 terms, salaries were expected to be around A\$90 000 to A\$100 000 for accomplished teachers, and A\$110 000 to A\$120 000 for leading teachers. Indexing these to 2010 values (assuming annual pay rises of around 4 per cent) suggests that salaries for almost all of these teachers would then be above A\$100 000. According to the 2010 Staff in Australia's Schools survey, only 0.8 per cent of primary teachers and 2.4 per cent of secondary teachers earned more than A\$100 000. ACER's proposal effectively envisaged that 50 per cent would be in this category. Thus, the cost of the proposal was significant if it was assumed that the workforce would remain at its current level. It was estimated that on this basis, annual staffing costs would eventually be about 20 to 25 per cent higher than otherwise, or around A\$4 billion in 2008 terms.

Sources: Dinham, Ingvarson and Kleinhenz (2008); McKenzie et al. (2011); Productivity Commission estimates.

Employing fewer, better quality, teachers and rewarding them through a more formal career structure, rather than through the current system based on length of employment, is likely to be more effective and efficient. Other initiatives, such as raising the required qualifications and abilities of those who wish to become teachers, and better teacher training and mentoring, would also contribute to higher quality teaching.

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