

**Australian Council for Educational Research (ACER)**

---

**From the SelectedWorks of Dr Lawrence Ingvarson**

---

October, 2012

**Comments on DEECD Discussion Paper: NEW  
DIRECTIONS FOR SCHOOL LEADERSHIP  
AND THE TEACHING PROFESSION, JUNE  
2012**

Lawrence C Ingvarson, *ACER*



**SELECTEDWORKS™**

Available at: [http://works.bepress.com/lawrence\\_ingvarson1/199/](http://works.bepress.com/lawrence_ingvarson1/199/)

## Comments on DEECD Discussion Paper:

### NEW DIRECTIONS FOR SCHOOL LEADERSHIP AND THE TEACHING PROFESSION, JUNE 2012

Lawrence Ingvarson

#### Introduction

Please note: This is a personal response to the DEECD Discussion Paper

The Minister's statement that the Government plans to focus its reform efforts on teacher quality and school leadership is a welcome and timely initiative.

A recent study by ACER (Ingvarson, et al. 2012), for example, showed that countries, such as Chinese Taipei and Singapore, that do well on international tests of student achievement such as TIMSS and PISA, not only ensure that they offer salaries and conditions that attract high quality entrants to teacher education. They have built strong systems for assessing and accrediting teacher education providers. They also have rigorous arrangements for ensuring that graduates meet high standards of performance before gaining initial certification and full entry to the profession. In addition, they offer salaries and career paths that reward and retain teachers who attain high standards over the long term.

These findings reflect the main components of systems for assuring high quality teachers and teaching:

1. Competitive salary structures that attract and retain high quality graduates
2. Recruitment policies that link supply closely to demand and high standards for entry to teacher education programs
3. Rigorous procedures for the accreditation of teacher education programs linked to the quality of graduates
4. Registration and gaining full entry to the profession based on rigorous standards-based performance assessment
5. Strong incentives for professional learning and widespread use of successful teaching practices based on a standards-based professional certification system, linked to substantial salary increases, not bonus pay.
6. Distribution of resources to ensure schools can compete equitably for nationally certified accomplished teachers.

These findings and those of other international studies (OECD, 2005, 2009, 2010, 2011; Barber & Mourshed, 2007) provide a basis for reviewing the Actions recommended in the Paper.

#### Overview

The Discussion Paper identifies three fronts on which the Victorian Government will take action over the next ten years.

Action 1: Attract great people into teaching: attract stronger candidates and improve their preparation.

Action 2: Create a high performance profession: stimulate a culture of excellence and effective professional development.

Action 3: Provide strong direction and support: elevate the role of leadership at school and system levels.

As a general observation, each of these areas for action is important. The diagnosis of areas requiring action is accurate. However, the prescription is weak in some areas and needs to be strengthened. The international research on the characteristics of countries with strong quality assurance systems also helps to identify some important gaps and misplaced priorities in Victoria's plans for lifting education outcomes. It also shows that several actions considered in the Paper are, in fact, not important characteristics of high performing countries, such as Teach for Australia, career change programs, and bonus pay-type performance management schemes.

Another general observation is that the Paper could show greater awareness of recent history and research concerning efforts to strengthen the teaching profession. While the title refers to "New Directions . . ." the Paper itself is silent about this complex history and how the Paper represents a new departure from what has gone before. For this reason, there is a danger that some of the suggested actions may repeat the mistakes of the past.

The Paper is also surprisingly silent on the current national context. There is little mention of the COAG National Partnership on Teacher Quality, even though this program has funded several, if not most, of the projects listed as "What Victoria has been doing".

Overall, the Discussion Paper needs a stronger vision of what it means to be a profession. This is reflected in the fact that its main sources of advice appear to be to management consultants and economists. Although the Paper is about new directions for the teaching profession, teachers' own professional associations do not appear to have had any input to the Paper. The latter have done world class work on developing teaching standards over the past 15 years, yet this work is not mentioned, nor the benefits that would accrue from capitalising on it. Most employing authorities would give an arm and a leg to have evidence of such commitment to promoting high quality practice from those they employ.

There are no new directions in the Paper for teaching, *as a profession*. The top performing education systems fondly quoted in the Governments are noteworthy for treating teaching as a profession. Professions are delegated major responsibilities, such as defining standards for advanced careers stages, promoting developing toward those standards and providing valued recognition for those who reach them. This is what professions do to lift quality.

There is no hint in the paper of moving in this direction. Rather, the Paper puts its faith in greater managerial surveillance and control over teachers' work, ignoring the repeated findings from Auditor-General reports and other research, that performance management schemes match poorly the nature of professional work and have little effect on professional development. As researchers Perry et al., 2009 point out, they reflect the New Public Management's view of "organizations as a chain of low-trust principal/agent relationships.

The idea of competitive annual bonuses as a way to motivate teachers is quite inconsistent with the research on what really drives high performance in complex work like teaching (e.g. Pink, 2009). What drives good practice for teachers, like all professionals, is a sense of self-direction, and opportunities to build mastery and fulfil the values that drew them to teaching in the first place. The rewards that matter to teaching are those that based on professional standards and the judgments of expert peers.

{The statement at the bottom of page 4, "Students at the same school differ more in their performance than students at different schools, pointing to significant variability in standards of teaching within each school" is nonsense. Variation in student achievement within a primary class is even greater than variation between different classes within the same school, even though each class usually has just one teacher. The main causes by far of variation in student achievement within schools and classes are the characteristics that students bring with them, including ability and SES. This is not to say that variation in student achievement from class to class is not influenced by the knowledge and skills of the teacher – just that it is much less of a cause of variation than student characteristics. }

### **Action 1:**

#### **Attract great people into teaching: attract stronger candidates and improve their preparation**

The discussion paper rightly points to the importance of attracting strong candidates and preparing them well.

However, it does not provide action on the main factors affecting candidate choices - the status of teaching and long-term salary prospects. The research on factors affecting graduate career choices is clear on this. These are the reasons why fewer high quality graduates are choosing teaching. It is puzzling why there is no recognition of the central need for action to lift the relative salaries of teachers if the academic quality of candidates is to increase.

The Paper needs to acknowledge that, ultimately, governments, both state and federal, are responsible for ensuring that salaries enable teaching to compete effectively from the pool of talent. While most of the actions suggested for attracting better candidates may have benefits, they are weak compared with actions that would substantially increase salaries for teachers who attain high standards of practice and professional certification. None of the examples in the section "What Victoria is doing" has been a central feature

of policies for promoting teacher quality in the top jurisdictions cited earlier in this section of the report.

Table 1 in the Discussion Paper shows the decline in ENTER/ATAR scores for the past ten years for teacher education students. It could have been extended back another ten years or more. The message would be much the same. It has been a long term trend. What the table should have shown in a second row beneath the ATAR scores is the change in teacher salaries relative to GDP per capita over the same period of time. It would then have shown that the decline in ENTER scores is related to the decline in relative salaries for teachers.

The Discussion Paper might have noted the considerable international research showing a strong relationship between teacher pay and student performance across countries. A recent paper by Peter Dolton, et al. in the journal “Economic Policy” (Jan. 2011) concludes,

Our results suggest that recruiting higher ability individuals into teaching and permitting scope for quicker salary advancement will have a positive effect on pupil outcomes.

The authors go on to say:

To provide some idea of the scale of the effects we find our coefficients suggest that a 10% increase in teacher pay would give rise to around a 5–10% increase in pupil performance. Likewise, a 5% increase in the relative position of teachers in the salary distribution would increase pupil performance by about 5–10%. These effects are significant and robust to the estimation procedure we use and the different identification assumptions we make to facilitate each estimation technique.

In another study, the same authors showed that the number of high quality graduates in England who choose teaching moves up and down as relative salaries for teachers move up and down (Chevalier, Dolton & McIntosh (2007).

The author’s argue that each country gets the teachers it wants and deserves. Or, each country gets the teachers it is willing to pay for. The evidence is that Australia has been less and less willing to pay for high quality teachers. It has maintained reasonably competitive salaries at the entry stage but these rapidly become uncompetitive with other professions after five to ten years. It is this comparison that matters when high quality graduates make their career choices, not the starting salary. Where Australia falls down in comparison with high achieving countries is in the ratio of salaries at the top of the scale to that at the bottom.

The Ministers’ message in the Paper identifies that attracting quality teachers is essential if Victoria is to gain “the global competitive advantage it needs to prosper in a

demanding economic environment . . .” However, its action plan appears to avoid facing what is obvious in the light of the evidence.

If we want to attract better quality candidates, we have to offer better relative salaries. This calls for action on two fronts.

One is to lift the base incremental pay scale to higher levels. The other, equally important, perhaps more so, is to introduce one or two significantly higher salary levels beyond the top of the incremental scale for teachers who attain high standards of practice as demonstrated through a rigorous professional certification system.

A profession-run certification system builds strong incentives into the pay system for all teachers to learn how to incorporate research-based, successful teaching practices into their repertoire, as articulated in well-written, professional standards (Elmore, 1996). This is a far more effective way to use the pay system as a lever for improving student outcomes than the proposed annual competition for bonus payments. Teachers find professional certification a more professional and acceptable way to identify and reward good teaching (NBPTS, 2009). They also report that the task preparing evidence for their portfolio was a highly effective form of professional learning (NBPTS, 2001).

Raising the bar on applicants to teacher education is also desirable of course, but in itself will do little to make teaching more attractive to our ablest students.

Policies in several countries are mentioned with approval. Countries such as South Korea, Japan and Taiwan pay effective teachers 2.5 times the starting salary for teachers, compared with 1.47 in Australia. Australian teachers’ salaries are only 30% above GDP per capita, whereas the average in OECD countries is 65%. Contrary to recent reports, the net teaching time in hours per year for Australian teachers is well above the average for OECD countries.

Teaching is rated Finland’s “most respected” profession, and primary school teaching its most sought-after career. Some point out that pay is not the reason, as teacher salaries are similar to those in other European countries.

However, on delving deeper, the important point about Finland is that teacher salaries are comparable to other professions. (The same is true of other countries mentioned that do well on international tests of student achievement.) Top salaries for teachers are 77% higher than starting salaries. Finland does not have the wide salary disparity Australia has across the professions, meaning that teaching is able to compete with other professions for the ablest graduates. As a result, Finland is able to place high levels of trust in its teachers and spends less on weeding out weak teachers and on ineffective bonus pay schemes aimed at motivating teacher effort.

Several reports from the Australian Government indicate that, although many high achievers consider teaching important and challenging, they do not pursue a career in teaching because salaries, promotional pathways and status are limited relative to other

professions.<sup>1</sup> The recent Productivity Commission Report points out that teachers' pay has not kept pace with recent increases in other professions. It recommends linking pay to professional certification to ensure stronger links between pay and performance

The research is clear that annual bonus pay schemes are ineffective in improving the quality of teaching or student outcomes or in making teaching a more attractive career. As the recent Productivity Commission Report points out, tiered career pathways that recognise and reward professional certification provide more effective incentives for all teachers to aim for high performance standards.

### **Action 1: Improve teacher preparation**

While the Paper emphasises the need to strengthen arrangements for the assessment and accreditation of teacher education programs, there is also a need to strengthen arrangements for the initial certification (registration) of teachers. Gaining full entry to the profession is a crucial quality assurance stage and procedures for assessing the performance of applicants for full registration need to be as rigorous as possible.

If this assessment is rigorous it greatly reduces the need for expensive performance management arrangements in schools and difficulties in removing weak teachers. To ensure a fair and valid assessment, the period of provisional registration should be extended from the current one to two or three years. Efforts are in train to build a nationally consistent accreditation and registration system and these could to be mentioned in the Paper to give a fuller picture of current national efforts to assure teacher quality.

The paper points to concern among principals that about 30 percent of new teachers have limited teaching skills and blames teacher education providers. While the quality of training may vary somewhat from program to program, it needs to be recognised that governments and the salary levels offered are ultimately responsible for the difficulty providers have in attracting academically strong students – and that this variation in academic ability may explain more of the reasons for concern than the actual quality of the teacher education programs.

### **Action 2: Create a high performance profession: stimulate a culture of excellence and effective professional development**

The Minister's message states that school principals "will determine the quality of teaching in Victoria . . ." While this is true to some extent, it needs to be recognised that there are definite limitations to what principals can do to assure the quality of teaching in their schools, especially if the quality assurance mechanisms mentioned above for attracting, preparing and retaining good teachers remain weak.

---

<sup>1</sup> Attitudes to Teaching as a Career: A Synthesis of Attitudinal Research (DEST, 2006)

Nevertheless, the Paper correctly identifies the need for action that will improve the effectiveness of professional development and strengthen schools as professional communities. The paper is also correct in saying that while there are many highly accomplished teachers in Victoria, there is no systematic approach to identifying and rewarding them. This is one of the key areas where action is needed. It has been a theme of many reports over the past twenty years and it is time something serious was done about it.

The proposal to *trial* new ways of rewarding effective teachers should also be strongly supported.

There are two ways to go about building stronger links between pay and performance: one is through merit pay schemes, the other is by introducing a rigorous professional certification system. Each is based on quite different assumptions about how incentives work and how they link to improved student achievement.

Research over many years has made it clear that the worst way is to “incentivise” teachers through competitive, one-off bonus payments such as currently proposed for Victorian government schools (Murnane & Cohen 1986; Odden & Kelley, 2001; Ingvarson, et al. 2007; Springer. 2009).

Principals will face the impossible burden of evaluating most of their teachers every year and placing them into one of four or five payment categories; those who will receive no increment, those who will receive an increment only, and those who will receive an increment plus, 10%, 6%, or 1.4%. There is no teacher evaluation system capable of validly discriminating between four or five performance levels for every teacher every year – mission impossible.

In addition, the research is clear that a merit pay scheme will prevent the kind of professional collaboration that the Paper identifies as an important characteristic of high performance school systems. Collaboration and competitive annual bonus pay schemes are incompatible. Merit pay schemes such as the one proposed are mechanisms for compliance rather than commitment, which research shows repeatedly undermine and distort the very objectives they are trying naively to promote (Springer, 2009).

While there is no doubt that collaboration among teachers is a good thing, the Paper may be overstating on page 15 its effect on student outcomes, relative to the effects of their teacher’s knowledge and skill. The research is also unclear whether the presence of a strong professional community in a school is more a result of hiring confident quality teachers with positive attitudes to peer review , than changing existing attitudes among current staff.

The best way to link pay to performance is to improve incentives for all teachers to develop their practice to the level where they can demonstrate they have attained high professional standards and gain professional certification.



In contrast to bonus pay schemes, certification systems foster collaboration. The research indicates that when teachers support each other to gain certification it leads teachers to engage in the most effective methods of professional learning. Dramatic turnarounds in student achievement have been achieved when groups of teachers in the same school undertake preparation for professional certification together.

Recent US research indicates that a profession-wide system for providing certification to highly accomplished teachers has a greater impact on children's opportunity to learn than bonus payments based primarily on value-added measures from national tests of student achievement (National Research Council, 2008).

It is not a question of whether teachers can benefit from more feedback and evaluation – that has been well established long ago. The question is “under what conditions do teachers benefit from feedback and evaluation”. Here again, the evidence is clear. Teachers are more likely to seek insightful feedback from respected colleagues when preparing themselves for professional certification than they are within a competitive bonus pay regime. They benefit highly from feedback in a context where there is trust and support. The research is clear that such a context is strongly facilitated by a standards-based professional certification system, but undermined by performance management and bonus pay schemes such as those proposed (Johnson, 1984, 1986;

Although the evaluation report on the Victorian *Rewarding Teacher Excellence* model of merit pay has still not been released, it has to be acknowledged that the model has failed to gain support or respect from schools. Interviews with principals from the few schools who signed on indicate that they implement the model in very different ways and inconsistently. The assessment tools suggested were undeveloped and untested. As is common with so many of these schemes, proponents are often naïve about the complexities of valid teacher evaluation. They borrow models from management that have little validity as they do not have the capacity to distinguish competent teaching from highly accomplished teaching. They are often tacked on as an afterthought as if they are unproblematic.

Merit pay schemes based on annual bonus payments do not provide an effective way of building stronger links between performance and pay. Nor are they an effective way to radically increase to extent to which evidence based, successful teaching practices are widely adopted in schools, which is the critical factor in lifting student learning. Apart from the fact that merit pay models like the Victorian *Rewarding Teacher Excellence* scheme lack evidence of validity and reliability, they are also more expensive and cumbersome to implement than certification schemes.

In contrast, a rigorous certification system linked to a substantial salary rise provides incentives for all teachers to examine their practice in the light of professional standards and to seek the kind of professional development that will enable them to demonstrate they have attained high professional standards required for professional certification.

The research indicates that the soundest foundation on which to link salaries to higher levels of expertise is through a rigorous professional certification system, linked to substantial higher salary levels as recommended in many recent reports (e.g. Senate Inquiry into the Status of Teaching, (Crowley, 1999: Australian College of Educators, 2003: DEST (2003); Dinham, Ingvarson and Kleinhenz, (2008) and the Productivity Commission (2012)).

Authors of the Discussion Paper do not appear to have considered these reports or this option, although the Australian Government has committed \$221m to support the introduction of such a system over the four years to 2015. A tiered professional certification system with at most three levels of certification from registration onwards would be less disruptive and intrusive, and would stimulate professional collaboration.

While an external professional certification system provides a more rigorous assessment, and therefore gains more respect and trust, it is also less expensive and divisive. While a bonus pay scheme, such as the one proposed for Victoria, will require most teachers in Victoria (~40,000) to be assessed by school managers every year, a certification system would require much smaller cohorts of applicants for certification to be assessed each year as teachers consider themselves ready to apply (e.g. it is estimated that approximately 3-5000 teachers might apply for certification each year).

### **Action 3: Provide strong direction and support: elevate the role of leadership at school and system levels**

The Paper would benefit from a long-term vision of developing teaching as a profession; of professionalising teaching. It rightly points to the importance of leadership at the school and system levels. However, the importance of another kind of leadership needs to be recognised - one that is hinted at in the paper but not developed – and that is leadership at the level of the profession. Teachers look not only to principals and educational administrators for leadership in quality teaching; they look to leaders in their field of teaching.

In Australia, teachers are just as likely, if not more so, to look to expert teachers who teach in the same field and to their professional associations for new ideas and examples of successful practice. We tend to ignore this reality over and over again. Politicians and senior administrators with new policies for improving schools come and go regularly. Teachers know this, close the classroom and get on with what their professional values tell them to do. Even policies promoting successful practices may struggle to penetrate practice. This will no longer do.

The teaching profession needs to offer more stable alternatives to waves of often conflicting reforms. Teaching has been a powerless profession unable to offer its own reforms. It needs its own agency for professional leadership that can speak with authority and on equal terms with policy makers, as in other professions. The critical credentials of a profession are the ability to define standards for accomplished practice and to apply them for purposes such as registration and awarding advanced certification. Teacher

associations have shown they can do this well, but employing authorities have offered little recognition of this capacity, or the great benefits it offers potentially for the profession to exercise greater responsibility for assuring quality practice.

One service that school systems and school principals wanting to promote quality teaching clearly need is a system for assessing and identifying teachers who attain high standards. This has proved very difficult to create if left to individual schools and school principals, or different employing authorities. Such a system needs to be profession wide, not “jurisdiction” specific. It needs to be the responsibility of an independent professional body with a charter from the Australian Government (or perhaps the Governor-General) to provide certification.

In well-established professions, one of the main leadership functions is to build a framework for continuing learning from registration to advanced levels of standards, and systems for providing certification for members who reach those standards. *Teaching needs such a system.*

Teachers in several countries have demonstrated that they can develop and apply high teaching standards. Nearly 20 teacher associations in Australia have developed standards for accomplished teaching in their field and they want them to be used for teacher evaluation and recognition (E.g. see Australian Science Teachers Association, 2002). These include subject associations, level-specific associations such as the Early Childhood Association, support associations such as the Australian School Librarians Association and associations for school principals.

Members of professional associations in Australia believe passionately that the profession should take the primary responsibility for setting and administering professional standards. And they recognise that this responsibility must be shared with employer and teacher unions, if teachers who gain its certification are to be rewarded financially and in career progression.

## **Final comments**

### *Time perspective*

The proposed actions in the Paper are mainly isolated, short-term projects, whereas a long-term plan is needed if the teaching profession is to be strengthened *as a profession*. As indicated in the beginning of this response, a coherent set of quality assurance mechanisms is a characteristic of the countries the Discussion Paper is keen to emulate.

There are no short cuts to lifting the quality and status of teaching and moving it closer to a genuine profession. The paper talks about “vision for the future of the teaching profession”, and lists three commendable action areas, but on close inspection the actual actions are not long term in character. Merit pay schemes, for example, are examples of quick fix schemes that have repeatedly failed when applied to schools. Teach for Australia and career change programs may have some short-term benefits, but they can hardly be relied on long term to build a stronger profession.

Despite the statements on page 9 about countries like Finland, Korea and Singapore making teaching a high status profession, few of the actions actually proposed are consistent with the core policies that those countries have followed over the past 30 years and more (see Pasi Salhberg's book, *Finnish Lessons, 2011*) where teachers' salaries and status are comparable with other professions.

### *Professionalising teaching*

It is desirable that the Paper recognises that there is necessarily a shared responsibility for quality assurance between government and the profession. A long-term vision of teaching as a profession is needed; one with real professional responsibilities for standards, certification and quality assurance, as with other established professions. The Paper needs to include actions that will strengthen the teaching profession, as a profession with professional responsibilities, long term.

The “problem” of teacher quality is treated as if it is a management problem rather than an outcome of long-term government policy neglect. The paper seems to expect all will be well if we find better ways to *manage* teacher performance. Even to the point of suggesting schools might hire managers with no educational experience. This kind of Thatcherite faith in managerialism has been long discredited and its negative effects on professional practice well documented.

Placing greater weight on generic management competencies than professional expertise and experience has proved to be a mistake. Teachers do not look to people limited to generic management skills for leadership. The research indicates clearly that the most effective leaders, as in any profession, are people with a proven track record of expertise and achievement in professional practice. Ask teachers to take you to their leaders – the people whom they regard as leaders in their profession – the people they look to for useful ideas and professional leadership – and they rarely mention school administrators. They are far more likely to say they look to other teachers in their field and their professional subject associations.

### *Use certification to promote and reward excellence in teaching, not merit pay*

The paper correctly points out that leading countries, in terms of student achievement, like Singapore, Finland and Korea have raised the status of teaching and made it an attractive profession. There are many more students applying for teacher education places than are available. The paper incorrectly states that this is because these countries use incentives like merit pay schemes. Rather, it is because salaries rise to levels comparable to other professions.

Research shows a relationship between relative salaries and the academic quality of people attracted into teaching. It does not show a relationship between bonus pay schemes and student achievement. The paper rightly points to the importance of professional collaboration to high quality teaching. However, at the same time, the Government is proposing a cumbersome merit pay regime that will require every teacher to compete for one of four annual bonus pay categories every year ranging from 10 per cent to zero.

Countries that are doing well in international assessments of student achievement are not doing it because they have merit pay-type incentive schemes. They are doing it because they offer salary progression and working conditions that attract the ablest graduates – and keep them close to the classroom (Barber & Mourshed, 2007). Salaries for effective classroom teachers rise to more than double the starting salary in Singapore and Taiwan – and triple in Korea. Performance pay schemes based on professional certification are proving more durable than petty annual bonus pay schemes and are attracting increasing support (e.g. Johnson & Papay 2010).

## References.

- Australian College of Educators (2003). *National Statement from the Teaching Profession on Teacher Standards, Quality and Professionalism*. Canberra: Australian College of Educators. <http://www.austcolled.com.au/article/national-statement-teaching-profession-teacher-standards-quality-and-professionalism>
- Australian Science Teachers Association (2002). *National professional standards for highly accomplished teachers of science*. Canberra, ACT: Australian Science Teachers Association.
- Barber, M. & Mourshed, M. (2007). *How the Best Performing School Systems Come Out on Top*. McKinsey & Co.
- Chevalier, A., Dolton, P. & McIntosh, S. (2007). Recruiting and Retaining Teachers in the UK: An Analysis of Graduate Occupation Choice from the 1960s to the 1990s. *Economica*, 74, 69-96.
- Crowley, R. C. (1998). *A Class Act: Inquiry into the Status of the Teaching Profession*. Canberra: Report from the Senate Employment, Workplace Relations, Small Business, and Education Reference Committee.
- Department of Education Science and Training (2003). *Australia's Teachers: Australia's Future*. Canberra: Department of Education Science and Training.
- Dinham, S., Ingvarson, L. & Kleinhenz, E. (2008). Investing in Teacher Quality: Doing What Matters Most, in *Teaching Talent: The Best Teachers for Australia's Classrooms*. Melbourne: Business Council of Australia. <http://www.bca.com.au/Content/101446.aspx>
- Elmore, R.F. (1996). 'Getting to Scale with Successful Educational Practices', in Fuhrman, S.H. & O'Day, J.A. (Eds.). *Rewards and Reforms: Creating Educational Incentives that Work*. San Francisco: Jossey-Bass.
- Johnson, S.M. & Papay, J.P. (2009). *Redesigning Teacher Pay: A System for the Next Generation of Educators* (EPI Series on Alternative Teacher Compensation Systems • No. 2.). Washington D.C.: Economic Policy Institute.
- Ingvarson, L., & J. Schulle, J. (in press). *National Policies and Regulatory Arrangements for the Mathematics Preparation of Future Teachers in Sixteen Countries*. Amsterdam: International Association for the Evaluation of Educational Achievement (IEA).
- Ingvarson, L., Kleinhenz, E. & Wilkinson, J. (2007). *Research on Performance Pay*. Camberwell, Vic.: ACER Press.
- Marsh, J.A., Springer, M.G., McCaffrey, D.F., Yuan, K., Epstein, S., Koppich, j., Kalra,

- N., DiMartino, C., Peng, Art (Xiao) (2011). *A Big Apple for Educators; New York City's Experiment with Schoolwide Performance Bonuses: Final Evaluation Report*. Santa Monica: Rand Corporation.  
[http://www.performanceincentives.org/data/files/gallery/ContentGallery/POINT\\_Report\\_Executive\\_Summary.pdf](http://www.performanceincentives.org/data/files/gallery/ContentGallery/POINT_Report_Executive_Summary.pdf)
- Murnane, R.J. & Cohen, D. (1986). Merit pay and the evaluation problem: Why most merit pay plans fail and few survive. *Harvard Education Review*, 56, 1-17.
- National Board for Professional Teaching Standards. (2001a). *I am a better teacher: What candidates for National Board Certification say about the assessment process*. Retrieved September 2006.\*
- National Board for Professional Teaching Standards, (2007). *A Research Guide on National Board Certification of Teachers*. Arlington VA: NBPTS.
- National Research Council (2008). *Assessing Accomplished Teaching: Advanced Certification Programs*. Washington D.C.: National Academies Press.
- Organisation for Economic Cooperation and Development (2005). *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*. Paris: OECD
- Organisation for Economic Co-Operation and Development (2009). *Evaluating and Rewarding the Quality of Teachers: International Practices*. Paris: OECD.
- Organisation for Economic Co-Operation and Development (2010), *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States*. <http://dx.doi.org/10.1787/9789264096660-en>
- Organisation for Economic Co-Operation and Development (2011). *Building a High-Quality Teaching Profession: Lessons from around the World Background Report for the International Summit on the Teaching Profession*. Paris: OECD Publishing. <http://fulltextreports.com/2011/03/16/building-a-high-quality-teaching-profession-lessons-from-around-the-world/>
- Pink, D. (2009). *Drive: The Surprising Truth about What Motivates Us*. New York: Riverhead Books.
- Springer, M.G.(Ed.) (2009). *Performance Incentives: Their Growing Impact on American k-12 Education*. Washington D.C.: Brookings Institution Press.
- Odden, A., Kelley, C. (2001). *Paying teachers for what they know* *Journal of Policy Analysis and Management and do: New and smarter compensation strategies to improve schools*. Thousand Oaks, CA: Corwin Press.
- Dee, TS. & Keys, BJ. (2004). *Does merit pay reward good teachers? Evidence from a randomized experiment.*, 23(3), 471–488.
- Perry, JL., Engbers, TA. & Jun, SY. (2009). Back to the Future? Performance-Related Pay, Empirical Research, and the Perils of Persistence. *Public Administration Review*, 2009