

A woman with short dark hair and glasses, wearing a white polo shirt and a necklace, is looking slightly to the left. She is standing in front of a chalkboard that has some handwritten notes on it, including "307", "MP", "Update", and "lecker". The entire image has a light blue tint.

TEACHER MERIT PAY

A Literature Review

February 2010

ONTARIO ENGLISH
**Catholic
Teachers**
ASSOCIATION

TABLE OF CONTENTS

Executive Summary	iii
Introduction	1
Models of Performance Pay	1
History of Merit Pay	3
The Promises and Perils of Merit Pay	5
Merit Pay Use in Selected International Jurisdictions	13
Critical Analysis of Outcomes	22
Concluding Remarks	28
Bibliography	31
Appendix	43

LIST OF TABLES

Table 1:

Summary of Performance-Based Reward Programs for Teachers in OECD Countries	Appendix
--	----------

Table 2:

Selected major performance-based pay programs: USA	Appendix
--	----------

Table 3:

Potential Effect of Performance-based Rewards	24
---	----

The Ontario English Catholic Teachers' Association (OECTA) represents 45,000 women and men who have chosen teaching careers in the Catholic schools in Ontario. These teachers are found in the elementary panel from junior kindergarten to Grade eight, in the secondary panel from Grade nine through Grade twelve, and occasional teachers in both panels, in publicly funded schools.

This paper was written for OECTA by Theresa Shanahan, Assistant Professor and the Coordinator of the Graduate Diploma in Post-secondary Education in the Faculties of Education and Graduate Studies at York University.



EXECUTIVE SUMMARY

Introduction

This paper examines the current literature on teacher merit pay for elementary and secondary school teachers. It is prepared for the Ontario English Catholic Teachers' Association. The paper distinguishes between various models of merit pay, provides a brief history of their use, reviews key arguments for and against merit pay, profiles three international jurisdictions employing merit pay programs and critically analyzes the outcomes of merit pay.

Models of Merit Pay

Three types of teacher compensation systems are most commonly used:

- **Uniform salary schedule** - where experience or years of service and education determine salary;
- **Performance-based systems** - where teachers are rewarded or sanctioned, based upon some form of performance evaluation;
- **Outcomes-based systems** - where teachers' salary is linked to student performance such as test scores or attendance.

There are three main models of performance-based compensation reward programs outlined in the research literature:

- **Merit pay**- refers to individual pecuniary awards based on student performance and classroom observation of effective teaching;
- **Knowledge-and skills-based compensation** - involves individual pecuniary awards for acquired qualifications and demonstrated skills and knowledge;
- **School-based performance pay (SBPP)** - involves group-based pecuniary rewards usually based on improvements in student or school performance on certain indices.

Many current models of merit pay are combinations of these three programs.

History of Merit Pay

Performance-based awards in education date back to the 1700s in England where a system of compensation for teachers linked teachers' salaries to students' attendance and the number of students passing examinations. Australia first introduced merit pay for teachers in 1812 as a cost-cutting measure. The early Australian programs also linked teachers' pay to student results. These compensation systems were discredited and did not last. By the early twentieth century pay-by-results programs were discontinued in England and Australia and were not resurrected until the 1980s and 1990s. By contrast merit pay schemes have a long history in the USA. They came and went regularly during the twentieth century. Early schemes rarely lasted more than a few years. Contemporary

American merit pay programs are imbedded in larger school-based reforms seeking to improve the nation's education performance on international education test scores. These include Reagan's A Nation at a Risk and G.W. Bush's No Child Left Behind legislation.

The Promises and Perils of Merit Pay

The main arguments in **favour** of merit pay are:

- Merit pay may improve teacher recruitment, retention, motivation and professionalism;
- The uniform salary schedule is unfair and rewards experience instead of performance;
- Merit pay may improve co-operation among teachers;
- Merit pay may improve educational outcomes such as student test scores;
- School management may improve as well as the allocation of resources;
- Merit pay programs can be structured so that they are a relatively cheap investment in education.

The main arguments **against** merit pay are:

- Merit pay does not improve teacher motivation, retention or recruitment;
- Merit pay undermines teachers' autonomy and professionalism;
- The evaluation and measurement criteria associated with merit pay are unfair and inaccurate;
- Merit pay is divisive, increases competition between teachers and undermines collegiality and co-operation;
- Teaching is a unique activity that does not lend itself to performance-related compensation;
- Merit pay narrows the curriculum and distorts pedagogy, resulting in teaching-to-the-test;
- There is no clear evidence that merit pay increases student outcomes or improves education;
- Merit pay creates hierarchies within school administration which corrodes professional relationships between teachers and principals;
- Merit pay is time-consuming and costly to implement;
- Merit pay is based on a market-model of education that distorts the values underpinning public education;
- Merit pay results in unintended consequences and can result in opportunistic behaviour on the part of potential recipients in order to win awards or dodge sanctions.

Critical Analysis of Outcomes

The generation of traditional merit pay schemes that crudely linked individual teachers' pay to student test scores has been roundly criticized. Moreover, these early programs proved unsuccessful in terms of persistence, cost effectiveness, teacher motivation, and improving student achievements. The most recent generation of merit pay schemes that have emerged in the last decade have sought to rectify earlier problems. By contrast they are predominantly based on teachers' knowledge and skills and are school-based (group) awards instead of individual teacher awards. Recent schemes are now more complex compensation programs that weave a host of performance indicators, targets, benefits, and school resources together with teachers' salary bonuses. They are often imbedded in larger school-based reform programs (as in the case of the three jurisdictions profiled in this paper) making it difficult to isolate and accurately measure the effect of teachers' performance on educational improvements.

There is very little research evaluating whether the latest generation of merit pay schemes have resulted in educational improvements. The few studies that do exist are methodologically flawed because evaluation of the effects of the merit pay alone is exceedingly difficult to tease out from the host of other factors contributing to the educational reform. Moreover, these studies are limited to the USA and are dominated by individuals who are uncritically positive in their assessments. Not surprising the studies are funded and published by governments, foundations and think-tanks who are proponents of merit pay schemes raising concerns about their objectivity and bias. Even so the research on outcomes of current merit pay plans is mixed and, at best, inconclusive as to their overall success. That is to say, within the limited evidence available there is some suggestion that recent group-based performance awards may benefit student outcomes although more research is needed to confirm these outcomes. However, there is no evidence that individual merit pay programs improve educational outcomes. Nor is there conclusive evidence regarding the success of the latest generation of merit pay programs in terms of achieving their objectives, cost efficiency, retaining, recruiting and motivating teachers.

INTRODUCTION

This paper examines the current literature surrounding merit pay for elementary and secondary school teachers. It focuses primarily on research considering the public sector school system. The review of literature is limited to research from English-speaking countries. The paper has five major sections. The first section reviews various models of merit pay. The second section provides a brief history of merit pay use. The third section identifies key issues and arguments for and against merit pay in current research. The fourth section reviews merit pay use in selected international jurisdictions. Three jurisdictions are profiled including: the USA, the United Kingdom and Australia. The final section critically analyses outcomes of merit pay programs and comments on the implications for educators.

MODELS OF PERFORMANCE PAY

Three types of teacher compensation systems are most commonly used: the uniform salary schedule; performance-based systems; and outcomes-based systems. **Uniform salary schedules** are usually found in unionized environments where experience or years of service and education determine salary. The salary schedule applies to all teachers in a district regardless of age, subject matter, grade level and is negotiated by union representatives. The uniform salary schedule is by far the most common in North America. It is estimated that, in the USA where experimentation with teacher compensation schemes has been the most common across the globe, at least 95% of public school districts employed a uniform salary schedule in 2001 (Goldhaber, 2001). Moreover, all Canadian jurisdictions employ the uniform salary schedule for public school teacher compensation (Canadian Teacher's Federation, correspondence, January 19, 2010). **Performance-based salary schedules** attach a portion of salary to observable behaviour. Performance-based pay schemes reward or sanction teachers based upon some form of performance evaluation. **Outcomes-based salary systems** link compensation to student performance such as test scores or attendance. Performance-based programs reward teachers for what they do, whereas outcome-based programs reward teachers for what their students do (Chamberlain, R., Wragg, T., Haynes, G., & Wragg; Caroline et al, 2002; Odden & Kelley, 2002; Harris, 2007).

Many compensation programs are hybrids of performance-based systems and outcomes-based systems. These hybrid systems attach teacher pay to observable performance (such as professional development or teaching techniques) as well as to student outcomes (such as performance on tests).

There are three main models of performance-based compensation reward programs outlined in the research literature:

- merit pay;
- knowledge-and skills-based compensation; and
- school-based performance pay (SBPP).

The first model, **merit pay**, refers to individual pecuniary awards based on student performance and classroom observation of effective teaching (Harvey-Beavis, 2003). In the 1970s and 1980s, merit pay schemes of this type usually evaluated teachers against one another for fixed pools of money delivered as bonuses. The methods of gathering evidence to evaluate teachers for the bonuses were not standardized or criterion-referenced and were criticized for their doubtful validity and reliability. Evaluation methods of teachers included classroom observation, checklists, and one-off tests of student performance (Ingvarson, Kleinhenz, & Wilkinson, 2008; Murnane & Cohen, 1986).

The second model, **knowledge-and skills-based compensation**, involves individual pecuniary awards for acquired qualifications and demonstrated skills and knowledge.

The third model is **school-based performance** which involves group-based pecuniary rewards usually based on improvements in student or school performance on certain indices (Harvey-Beavis, 2003; McCollum, 2001; Odden & Kelley, 2002).

The distinctions between the three models of performance-based pay (individual merit pay, knowledge-and skills-based pay, and school-based rewards) are often collapsed in the research literature. ‘Merit pay’ and ‘performance pay’ are used interchangeably in the literature. Research from North America tends to refer to these programs as ‘merit pay’ while research from the UK and Europe tends to refer to these programs as ‘performance pay’. The differences between the two revolve around what is assessed to get the bonus pay, and who evaluates the teacher to determine the pay. ‘Merit pay’ usually involves a narrow and often technical range of criteria to be assessed, such as test scores of students and the subjective evaluation of supervisors. ‘Performance pay’ usually involves a wider range of assessment criteria and methods that may, or may not, include student achievement, knowledge-and skills-based performance evaluation, portfolios, leadership activities, professional development and additional credentials. Because there are no uniform definitions for ‘merit pay’ and ‘performance pay’, arguments in the literature for and against these programs are often conflated. Both terms are considered in this paper.

HISTORY OF MERIT PAY

Performance-based awards in education date back to the 1700s in England where a system of compensation for teachers linked teachers' salaries to students' attendance and the number of students passing examinations. Concerns raised in these early uses of merit pay centered around the difficulty of capturing the complexity of teachers' work in a test score, the lack of reliability of test scores and the lack of consistency of testing conditions as well as the destruction of the co-operative spirit between teachers. Despite criticisms merit pay persisted for three decades until the school inspectors themselves voiced dissatisfaction with them arguing that the results of these payment schemes led to rote memorization of tested material by students. Other factors contributing to their demise included teachers organizing and seeking change in their working conditions, and education leaders becoming increasingly critical of the impact of merit pay schemes on curriculum and pedagogy (Harris, 2007; Podgursky & Springer, 2007).

Australia first introduced merit pay for teachers in 1812 as a cost-cutting measure. The early Australian programs also linked teachers' pay to student results. These compensation systems were discredited and did not last. By the early twentieth century pay-by-results programs were discontinued in England and Australia and were not resurrected until the 1980s and 1990s.

By contrast in the USA merit pay schemes came and went regularly during the twentieth century. Early in the twentieth century education leaders in the USA advocated a system of merit pay to attract and retain the best teachers (Harris, 2007; Johnson, 1984). As was the case in England, teacher pay was generally attached to student performance. Although these plans were usually short-lived, by 1918 almost half of the US school districts surveyed had instituted some form of merit pay for teachers. They were not without controversy, however, and ultimately pitted teachers, administrators, civic associations and unions against one another (Harris, 2007; Johnson, 1986). By 1928 less than 20% of US districts were employing merit pay for teachers. Criticisms included that merit pay lowered teacher morale and accentuated rivalry amongst teachers. Accurately and reliably measuring the effect of teacher performance on student achievement also proved difficult.

Despite their earlier demise interest in merit pay schemes for teachers reemerged in the USA with Sputnik's launch in 1957 amid concerns about the quality of American schools. At that time approximately 10% of US school districts began to use merit pay but once again they did not last and the majority of schemes folded in less than five years (Harris, 2007, p.3, see also Murnane & Cohen 1986).

Contemporary American merit pay programs are imbedded in larger school-based reforms seeking to improve the nation's education performance on international education test scores. These include Reagan's *A Nation at a Risk* and G.W. Bush's *No Child Left Behind* legislation. In the 1980s *A Nation at Risk* painted a dismal portrait of American education highlighting school improvement as a major policy priority. In response President Reagan called for teacher pay and promotion to be linked to merit and competence. By 1985, 25 states had implemented mandated incentive pay programs for teachers that were linked to test scores, teaching in certain geographic areas or subject areas and low absenteeism. These merit pay programs were narrowly focused on 'outputs' such as student outcomes rather than 'inputs' such as teacher skills and knowledge. Awards went to individual teachers rather than to groups of teachers. Results were mixed. Some school districts reported that student test scores and teacher absenteeism had improved, but teachers themselves reported that the plans had not encouraged them to work harder, develop themselves professionally or come to work every day. By the early 1990s many of these traditional merit pay programs had disappeared.

Subsequently, 'knowledge- and skills-based compensation programs' emerged as an alternative strategy to remedy the defects of previous traditional merit pay. The new schemes compensate teachers by awarding individual and groups of teachers. The latest generation of merit pay schemes are not just simple bonuses but rather they are weaved into larger, more complex education reform programs, such as G.W. Bush's *No Child Left Behind Act*, 2001. Current forms of merit pay link bonus pay and other non-pecuniary benefits with the external evaluation of knowledge as well as skills and outcomes-based performance such as students' standardized test results (Harris, 2007; Frase, 1992; Malen, 1999; Odden & Kelley, 1996).

Historically merit pay programs have been short-lived. Contemporary estimates suggest that, notwithstanding the latest interest in merit pay, the vast majority of public school districts in the USA continue to employ a single salary scale to compensate teachers (Podgursky, 2007). Reasons for discontinuing merit pay programs continue to include problems with conducting evaluations, administrative difficulties, teacher resistance, inadequate funds to properly implement and sustain them, and inadequate measurement instruments (Harris, 2007).

THE PROMISES AND PERILS OF MERIT PAY

This section thematically reviews the traditional arguments for and against merit pay.

i. Teacher Recruitment, Retention, Motivation and Professionalism

The primary objectives of merit pay, especially in the USA, have been to recruit, retain and motivate teachers. Research suggests that, historically, working conditions in public education in the USA have been dismal. This, combined with low base salaries, has resulted in challenges around the recruitment and retention of teachers into the profession. Consequently, recent incarnations of merit pay have been sold as a way to reverse the exodus of teachers and raise the professional standing of teaching.

Proponents of merit pay argue it motivates teachers to perform their best. It is argued that financial awards improve the socio-economic status of teachers which will attract and motivate individuals from a more talented pool of people. Proponents of merit pay suggest it will attract the most competent teachers and discourage the least competent. It is argued that the best graduates can only be recruited by a competitive market-based salary that allows teachers the opportunity to move beyond the starting salary and be paid at a comparable level to the private sector. They suggest that performance-based reward systems, such as merit pay, may improve the efficiency of salary scales. They argue for a market-model of compensation where teachers could move between schools, gaining recognition for their true market value instead of being locked into a district based on their seniority and qualifications. Poor performing teachers would be sanctioned by the market in reduced wages. Further, proponents of performance-based merit pay argue that merit pay motivates teachers to improve their performance and productivity. Performance-based pay, it is argued, develops clear goals and performance-oriented cultures within schools that motivate people with financial and non-financial rewards. Implicit in these arguments is the belief that if teachers improve their performance this will translate into broader educational improvements such as improved student performance (Harvey-Beavis, 2003; Kelley, 1999; Odden, 2000a; Ozcan, 1996; Odden & Kelley, 2002; Solomon & Podgursky, 2001; Tomlinson, 2000).

However, there is very little research to support the claims that financial incentives motivate teachers to improve their performance and productivity. In fact the research shows just the opposite that teachers are not motivated primarily or exclusively by money. The empirical research illustrates that teacher motivation is complex and influenced by many factors including non-pecuniary and intrinsic rewards as opposed to extrinsic and financial incentives. Even proponents of merit pay concede that, at best, money may be only one of many motivators and that the actual effects of financial rewards structures, such as merit pay, are unclear (Chamberlain et al, 2002; Firestone, 1991; Firestone & Pennell, 1993; Hanushek, 1997; Harvey-Beavis, 2003; Odden & Kelley, 2002).

Furthermore, Firestone and Pennell (1993) argue that non-monetary rewards, such as release time or holidays, may be better motivators than monetary bonuses. Their research suggests that evaluation associated with merit pay may diminish intrinsic motivation for teachers, even when the evaluation is positive. Ramirez (2001) argues that financial awards have unintended consequences. Rather than motivating teachers and increasing productivity, they increase resentment towards management, reducing employee loyalty and they result in reduced productivity. Moreover, both proponents and critics of merit pay agree that there is no clear and conclusive empirical research connecting teacher performance to student outcomes (Chamberlain et al, 2002; Harvey-Beavis, 2003; Odden, 2000a; 2001; Solomon & Podgursky, 2000).

Finally, there are many examples in the research of strong teacher opposition to merit pay because it constrains teaching, pedagogy and student learning. Ultimately this compromises teacher autonomy over their professional work. Autonomy is an essential and defining feature of professionalism. To the extent that merit pay programs undermine teacher autonomy, they also undermine teacher professionalism. (Ballou & Podgursky, 1993; Firestone & Pennell, 1993; Malen, 1999).

ii. Unfair Compensation Criterion

Currently the uniform salary schedule is the most common system of teacher compensation in North America. In this compensation system teachers are rewarded for the number of years of experience as well as the number of degrees. Proponents of merit pay say that the current system is unfair and rewards experience and education instead of performance. That is, exceptional teachers may not be rewarded because they are inexperienced or lack degrees. Proponents of merit pay argue that exceptional teachers who are unrewarded will become dissatisfied and will leave the education system. (Odden, 2000a, 2001; Harvey-Beavis, 2003; Solmon & Podgursky, M. 2000).

However, it is important to remember that these claims come out of the USA where teachers' working conditions and teachers' base salaries are notoriously low. Teacher recruitment and retention are recurring issues in the USA. There is much evidence that suggests that teacher dissatisfaction and attrition in the USA is the result of poor base pay and poor working conditions rather than the result of a uniform salary schedule. These poor conditions will not be remedied by a merit pay scheme and may, in fact, be exacerbated by it.

Critics of merit pay, in contrast, argue that the evaluation and measurement aspects of merit pay programs are unfair and inaccurate. Developing valid and reliable measures of teacher 'quality' and 'excellence' are fraught with difficulties. 'Quality' and 'excellence' are vague, socially-constructed and subjective terms that change over time and across audiences. That is to say, while you and I may both be in favour of 'excellent teaching',

my conception of what that looks like and your conception of what that looks like may differ dramatically. These terms have a way of organizing our consent and rendering invisible the diversity of meanings around 'quality teaching'. Furthermore, there are inherent power relations in who decides what 'excellent teaching' will look like. 'Excellence' is often understood and practiced as conformity to the dominant and traditional constructions of knowledge and pedagogy. The point here is that merit pay programs assume a common and standardized understanding of 'quality' and 'excellence' in education. They do not account for, nor do they reward diversity within and between schools and they may stifle intellectual freedom and pedagogical creativity of teachers (Harris, 2007; Harvey-Beavis, 2003; Shanahan, 2009).

To address this criticism new wave merit pay programs are often attached to standardized education reforms that identify numerous educational outcomes including test scores achievement. However, reaching for numerical indices to demonstrate quality is a crude, flawed and inaccurate assessment practice that cannot fully capture the range and complexity of teaching. Using student test scores as a measure of teacher quality has many problems. Test results are unstable from year to year because of random fluctuations unrelated to teachers' efforts. Furthermore, tests and testing conditions are inconsistent within and between schools which impacts on test results. In summary, many concerns exist with teachers that the evaluation process employed in merit pay programs is unfair, inadequate, inaccurate and difficult to administer objectively (Ballou & Podgursky, 1993; Chamberlain et al, 2002; Harris, 2007; Harvey-Beavis, 2003).

iii. Working Relations: Collegiality and Competition

A long-standing criticism of merit pay is that it increases competition between individual teachers and reduces collegiality. Moreover, research that surveys attitudes of teachers and principals suggests that merit pay destroys the cooperative spirit in schools, is at odds with team-building, is harmful to teacher morale and is potentially divisive. The sense of a school community is diminished as teachers are pitted against one another for individual rewards (Chamberlain et al, 2002). Furthermore, research shows that in the past merit pay programs have led to opportunistic behaviour among recipients of performance pay (Murnane & Cohen, 1986).

The emergence of school-based awards (whereby everyone gets a reward if the school meets its performance targets) was meant to address this concern. Still school-based awards have the effect of pitting school against school for scarce school district resources. Cutler and Waine (2000) suggest that school-based awards allow for the 'free rider' to receive awards based on their colleagues' work, ultimately causing resentment. Even proponents of merit pay caution that programs have to be carefully designed to prevent competition between staff members and between schools. Current models of merit pay that employ group-based award schemes attempt to address this problem by

rewarding co-operation between teachers. Proponents of merit pay suggest that teacher work can be redesigned so that the tasks for teachers are interdependent and teachers will be rewarded in the merit pay scheme for this interdependence. However, there is scant research evidence demonstrating the efficacy of school-based merit pay systems in achieving co-operation amongst teachers (Firestone & Pennell, 1993; Harris, 2007; Harvey-Beavis, 2003; Hoerr, 1998; Odden, 2000a; Podgursky & Springer, 2007; Solomon & Podgursky, M. 2000; Strath, 2004). In fact empirical research shows that programs that publicize the results of competitions for bonuses, or programs that have sanctions for not meeting targets, increase teacher stress and anxiety, all of which decreases morale (Kelley, Heneman & Milanowski, 2002; Kelley, 1999).

iv. The unique 'nature of teaching'

One of the most influential and oft-cited critiques of early merit pay programs came from Murnane and Cohen (1986). Drawing on economic literature they argue merit pay programs fail because teaching is not a field that lends itself to performance-related compensation. This view has been labeled the 'nature of teaching' hypothesis by Goldhaber et al (2008). This argument suggests that student performance is often beyond the control of the teacher, and that teacher quality and student performance cannot be directly linked in a causal fashion. Student performance is affected by many relationships including the roles played by the school, the family, the principal and numerous other actors and factors, not simply teachers. Therefore, education and student learning is a complex process involving the contributions of many people. Identifying which teacher produced a student outcome when learning can be cumulative is impossible to determine and is unfair. Although group-based merit pay awards attempt to address this issue, the equitable division of rewards among teachers is challenging, given the complexity of the relationships between teachers and students. The value of service provided by a teacher, or group of teachers, cannot be readily measured since achievement is affected by so many things outside a teacher's control (Harvey-Beavis, 2003; Murnane & Cohen, 1986).

v. Curriculum and Pedagogy

The literature against merit pay schemes argues that they pressure teachers to teach-to-the-test so as to increase test scores to gain the bonus. Merit pay programs also encourage teaching-to-the-targeted-student. Both consequences turn back the clock on progressive and inclusive pedagogy. Targeted performance indicators attached to bonus pay focus on certain students and on certain curricular material and create inequities in the school system. Chamberlain et al (2002) argue this occurs when specific skills or student outcomes are measured by merit pay schemes. Students, subjects or tasks not connected to the reward are neglected. Merit pay programs attached to student outcomes encourage teachers to teach to specific students that will score high or to teach to the

targeted students in order to achieve the targeted results that will count for the bonus. Similarly school resources are directed at the targeted students, subjects or tasks being measured for the award. Those students or outcomes attached to the reward are focused upon at the expense of the rest of the class.

This gravitation pull of performance targets happens in individual awards and school-based (group) awards. Incentive pay may result in teachers moving to schools with wealthier students who will perform better on tests regardless of the instruction they receive. Poorly performing students that require more teaching time and who may not benefit from this extra tuition may suffer as teachers focus on the students that will demonstrate the most improvement. Even with school-based reward strategies that provide incentives for improving scores of poorly performing students, teachers may concentrate on students likely to meet a threshold benchmark (usually the average middle of the class) at the expense of the highest and lowest performers (Chamberlain et al, 2002; Malen, 1999; Murnane & Cohen, 1986). The end result is that merit pay attached to student outcomes narrows the curriculum and skews the education system towards subjects and students where improvement is going to be rewarded (Chamberlain et al, 2002; Harris, 2007; Holt, 2001; Harvey-Beavis, 2003; Ramirez, 2001).

By contrast proponents of merit pay argue that, when performance-based pay is linked to student outcomes, teachers may gain the freedom to innovate since they no longer are slaves to certain teaching processes but can focus on achieving the outcomes in any way possible. In fact they are suggesting that ‘teaching-to-the test’ may be a good thing and it may result in more creative teacher pedagogy. In addition, proponents of merit pay suggest that student outcomes can be improved when quality teachers are moved to low socio-economic areas and specifically rewarded for success in these areas. Criteria to reward teachers can be fashioned to meet the needs of different areas based on socio-economic, racial, gender demographics of the student population (Harvey-Beavis, 2003; Solomon & Podgursky, 2001).

vi. Student Learning

Odden (2000b) and other proponents of merit pay argue that logically there must be a positive link between teacher quality and student achievement so that any method of improving teacher quality must improve student outcomes. He argues for objective standards to determine teachers’ skills and performance. Teachers may then be rewarded with bonuses for professional development which would improve their skills and knowledge thereby benefiting the students. Student outcomes may also be improved by linking merit pay to targeted improvements in key areas and subjects (Odden 2001). However the literature linking merit pay schemes to improved student performance is slim at best and mixed in terms of results. There is no clear, consistent evidence that merit pay increases student performance. Furthermore it is extremely difficult to prove,

in a methodologically sound manner, that merit pay or teacher performance improves student achievements given the many factors that contribute to student learning.

The focus on outputs in merit pay schemes, such as student achievement scores, is problematic. These test scores are offered as proxies for student learning. While they facilitate comparisons within and between education systems at the same time they overlook the process of education: that is, the how and why students learn. Merit pay schemes that use performance indicators such as test scores are reductionist. They are selective. They do not tell us why something is happening in our classroom or even what is happening in students' learning (Shanahan, 2009). They invite simplistic and misleading comparisons that eventually lead to rankings of teachers and rankings of schools. This approach ignores important institutional and societal context that affects achievement. Ultimately it distracts from the critical issues of improving the learning of students (Murphy, 2001).

vii. School Governance and Decision-making

Some policy analysts argue that performance-based pay schemes improve the governance and management of schools because under these programs principals summatively evaluate their teachers regularly and therefore know the quality of teachers in all classrooms. This research points to Murnane and Cohen's work (1986) that showed that principals in performance-based systems evaluated their teachers more harshly than in non-performance-based systems. It is further argued that resource allocation in schools is improved with merit pay, becoming more precise and aligned with organizational goals and policies. Proponents of merit pay argue that school goals are clarified and reinforced in performance-based reward systems. It is also believed that teachers will share information with administrators if they stand to benefit from improved outcomes (Harvey-Beavis, 2003; Kelley, 1999).

However, there is no empirical evidence that demonstrates that merit pay improves governance and resource allocation. By contrast there is a body of literature that argues that merit pay contributes to a culture of managerialism in education and exacerbates hierarchal relationships between teachers and principals. This culture undermines teacher morale and student learning. Murnane and Cohen (1986) argue that performance-based merit pay corrodes the professional relationship between teachers and principals because principals must employ summative evaluation to determine teachers' worth to decide who will get the bonus award. This approach flies in the face of formative evaluation typically used by educators that allows for on-going improvement. This was demonstrated by the principals in the above study who preferred to use evaluations to build trust rather than to determine merit or sanction. Moreover, in Murnane and Cohen's research teacher morale was negatively affected if they were deemed not worthy of the merit bonus. Teachers that do not receive the award question the fairness

of the evaluation, especially when evaluation criteria are not transparent (Harvey-Beavis, 2003).

viii. The Market-model of Education

Merit pay is fundamentally a market-based scheme found in private sector compensation models. For those who embrace the market-model of education it is argued that public education can become more efficient by adopting private sector techniques, management strategies and decision-making (Odden & Kelley, 2002). Complex organizational structures such as large, private sector firms are used to provide a template because, it is argued, they have similar environments to schools and often use performance-based methods of remuneration. Moreover, merit pay programs are available in government and non-profit education sectors (for example in colleges and universities) which suggests that performance-based programs are not exclusively private sector appropriate (Odden, 2000a; Ballou & Podgursky, 2001).

Critics of performance-incentive compensation systems argue that merit pay represents a fundamental shift in the values underpinning our education system including relationship, collegiality, and community. These are performance models of accountability imbedded in a market-model of education. They are infused with the distorted values, principles, discourse and logic of the market that is, the ideological belief that markets are infallible, that the private sector is more disciplined, efficient, effective and productive than the public sector, that competition and market forces are fair and strengthen the economy and that education should be in service to the economy. This view forces us to define ourselves as educators and to define our educational activities in terms of market principles and in the language of the market, in a standardized and quantifiable way. This approach takes no heed of the fact that aspects of what educators do defy quantification. Consequently, they disappear from the evaluation process and ultimately are not rewarded. If not rewarded they may disappear from teachers' repertoire of behaviours (Shanahan, 2009).

In short, opponents of merit pay argue that education is a public good and should not adopt private sector market mechanisms. Private sector compensation models are ill-suited to public education as evidenced by their historical lack of success. Nor is there any research that shows a market model of teacher compensation in education is more cost-efficient or effective. Further, the nature of teaching and education is relational and involves the cultivation of human beings and citizens. Schools are not factories producing widgets, nor are they large firms keeping track of their billable hours. Their outputs are not easily measured or counted (Chamberlain et al, 2002; Firestone & Pennell, 1993; Harvey-Beavis, 2003; Malen, 1999; Holt, 2001; Murnane & Cohen, 1986).

ix. Implementation Challenges: Teacher Opposition, Cost and Administrative Complexity

Teacher disapproval and strong opposition from teachers' unions are consistently cited as a major difficulty with the implementation of merit pay programs. Accuracy of evaluation of teachers and wage differentiation based on subject taught or based on the subjective evaluation of teachers have been considered unacceptable to both (Harris, 2007; Harvey-Beavis, 2003).

Costs associated with implementation also impede merit pay programs. Critics suggest that merit pay programs are costly when properly implemented. Research from both private and public schools suggests that costs associated with implementation that can be prohibitively expensive (Ballou, 2001). In order for pecuniary rewards to be meaningful and to alter teacher behaviour they have to be significant (\$1000+ per teacher), because small bonuses undermine the motivational aspect of the programs. However, large bonuses can quickly bankrupt the system unless quotas are established. But quotas also adversely affect teacher motivation (Malen, 1999). Merit pay programs require increased education revenue, which may be politically impossible and unsustainable unless funds are taken out of the system elsewhere and devoted to the bonuses, which may be equally untenable (Harvey-Beavis, 2003).

Odden (2002), a leading proponent of merit pay, acknowledges that administering systems of merit pay, with the associated evaluation, requires an extensive bureaucracy. It is expensive and time-consuming to evaluate every teacher regularly (Cutler and Waine, 2000). Furthermore proponents and critics of merit pay both suggest that poor design and implementation in the past have created difficulties for merit pay. Developing fair and reliable indicators, as well as training evaluators who will implement the system, requires planning, time, resources and organizational leadership (Harvey-Beavis, 2003; Rammirez, 2001; Odden & Kelley, 2002).

Solomon and Podgursky (2001) offer a rather cynical solution to the cost problem. They argue that existing salary schedules rewarding seniority and education can be flattened and the revenue gained from this may be used to reward teachers' performance. This proposal would render performance awards revenue-neutral. Proponents argue that, in this way, merit pay schemes may be structured as a relatively cheap investment in education and yet the awards may still be large enough to alter behaviour (Harvey-Beavis, 2003). Teachers need to be clear, however, that this proposal essentially lowers their overall base salary and redistributes the money as bonuses.

x. Unintended and Perverse Consequences of Merit Pay: Reward by punishment.

Rather than reward the best teachers, merit pay may punish them. The best teachers may be given the most difficult classes that perform the lowest academically and therefore merit pay based on student performance may be punitive (Harvey-Beavis, 2003). Moreover, Clotfelter and Ladd (1996) argue there are systemic differences in student progress which can be attributed to socio-economic, racial and gender characteristics. If this is adjusted for in the reward system then undesirable messages are sent to the community that educators have a reduced or different expectation of student outcomes in certain areas.

Merit pay schemes reward and sanction through loss or gains in salary. This is ‘the carrot and stick’ philosophy of compensation. It ‘punishes through rewards’ (Kohn, 1993). Alfie Kohn argues that the use of sanctions in organizational management is a deficit model of education that undermines teacher morale and autonomy, pedagogy, evaluation, as well as school reform and improvement. It turns teachers into test-preparation technicians (Kohn, 2003).

MERIT PAY USE IN SELECTED INTERNATIONAL JURISDICTIONS

A minority of OECD countries (11 of 30) have introduced components of performance-based awards for teachers. These include Australia, the United Kingdom, the United States, Belgium, Denmark, France, Germany, Korea, Mexico, New Zealand and Sweden. (See Table 1 in Appendix for description of these programs). No provincial jurisdiction in Canada has yet to employ teacher merit pay in public schools (Canadian Teachers’ Federation, correspondence January 19, 2010). However, in April 2006 MLAs in the Alberta Legislature passed a motion to urge the government to review the remuneration system of teachers with the view of linking teacher pay to performance evaluations (Svidal, 2006).

The most common merit pay programs employed internationally are variations of individual merit-pay and group-based rewards, with financial rewards or other benefits being used to supplement an existing salary scale. Even in the OECD jurisdictions that do employ merit pay, no jurisdiction bases teacher salary completely on performance evaluation. World-wide, experience and formal qualifications remain the strongest determinants of teacher compensation. The research suggests that most of the OECD countries who have adopted performance-based compensation programs for teachers have introduced these measures incrementally and cautiously (Harvey-Beavis, 2003; Santiago et al, 2009).

The following sections will profile the three jurisdictions that have employed performance-related compensation schemes most extensively. These are: the USA; the United Kingdom; and Australia.

USA

The pattern of merit pay schemes in the USA has been a carousel of implementation, abandonment, re-implementation in a different form, and re-abandonment. Nevertheless, interest in performance-related pay programs continues to grow in the USA. Currently performance pay for teachers is embedded in standardized education reform in the USA. There are a number of different programs being implemented at the district and state level, as well as national programs and support from the federal government. Most recently, in 2001, under the *No Child Left Behind Act*, the US federal government mandated that states use test-based accountability systems that include annual standardized testing of all students, which married well with traditional merit pay programs that link teachers' pay to student test scores.

The highly localized governance of education in the USA has led to a wide variety of merit pay schemes. See Table 2 in the Appendix for a selection of current programs in the USA. The merit pay schemes of the 1970s and early 1980s which linked teachers' pay strictly to student achievement failed to attract much support and were generally short-lived. Evaluation of teachers in these schemes was based on classroom observation by the principal using observational checklists of questionable validity as the main source of assessment typically coupled with student achievement. Research cites the negative impact of these early schemes which were discredited because teachers lacked faith in the fairness and validity of the evaluation process. Concerns emerged of bias and favoritism in assessment. Goals and objectives of programs were not clear. Funding for implementation was inadequate. Educators believed that the merit pay programs led to competition between teachers and undermined collegiality and community at schools. Objections arose around the inappropriateness of using student achievement as a measure of teacher performance. Furthermore, charges that schools were cheating by misrepresenting student test scores were common (Odden & Kelly, 1997; Johnson, 1986; Ingvarson et al, 2008). Odden & Kelly (2002), analyzing the failure of these early merit pay schemes, observe that they failed because they were based on false assumptions that incentives and competition motivate teachers to work harder and make teachers more effective.

Notwithstanding the failure of these early merit pay schemes some states continue to employ versions of them. State-wide merit pay policies are in place in Minnesota and Florida. Recently (in 2007) Florida amended its rigid merit pay compensation policy for teachers with a more flexible plan requiring that every school distribute a portion (5%)

of teacher base pay compensation to the best performing 25% of teachers, based on student test-score increases (state, national or local tests) as well as considering teachers' subject knowledge, skill in managing classrooms and ability to gear instruction to students' needs. Schools have some flexibility in deciding which test measures they will employ in the exercise (Honavar, 2007). Minnesota employs the Alternative Teacher Professional Pay System, or ATPPS also known as Q-Comps, in 35 school districts and 14 charter schools which includes pay based on both teacher performance and student test performance (Harris, 2007).

The Teacher Advancement Program (TAP) has also influenced recent merit pay initiatives in the USA. Recently renamed the National Institute for Excellence in Teaching (NIET) it was created and funded by the Milken Family Foundation, a philanthropic organization dedicated to increasing the number of highly qualified teachers, improving instructional effectiveness, and enhancing student achievement. The TAP program includes four components: multiple career paths; ongoing professional growth; instructionally focused accountability; and performance-and outcomes-based compensation. Although few districts have implemented TAP district-wide, a number of individual schools throughout the country employ TAP. Moreover, NIET funds and publishes research promoting teacher merit pay (Harris, 2007; Podgursky & Springer, 2007).

The US federal government has given its support to the idea of teacher merit pay by developing the Department of Education's Teacher Incentive Fund (TIF) which grants up to \$99 million for the design and implementation of performance-and outcome-based compensation systems in high-need schools. In 2006 a total of 16 grants were awarded, totaling \$42 million. However Congress subsequently reduced the TIF funding to \$200,000 in 2007, but the program continued in its reduced form.

Current research suggests that a second generation of merit pay programs is making a comeback in the USA. Knowledge-and-skills-based (KSBP) performance pay programs are replacing the traditional merit programs that used to link salary to student achievement. The move now is towards replacing, or augmenting, the incremental salary scale with a few major salary stages based on direct measures of teachers' knowledge and skills. The knowledge and skills are based on professionally-defined standards of practice, developed and viewed by the teaching profession as contributing to long-term professional development. In these new programs increasing expertise in curriculum content and teaching pedagogy, registration in new fields of teaching, and gaining leadership and team management skills are rewarded with bonus pay. Methods of assessing teachers' performance have also expanded in the latest incarnations of merit pay to meet previous criticism and to better reflect the complex and varied tasks of

teachers. Multiple sources of evidence are sought including: student work over time, classroom observations, tests of content and pedagogy, student evaluations and feedback, and documented contributions to the profession and wider school community elicited from the teacher (Ingvarson et al, 2008; Odden 2000a; Odden & Kelly, 2002).

There is little empirical evidence demonstrating the overall success of these new merit pay programs. The research that does exist is clearly mixed in terms of results. One such scheme implemented in Cincinnati, Ohio as a field test was unsuccessful even after undergoing revisions to meet initial problems. Although teachers in the field test accepted the evaluation standards as an accurate representation of 'good' teaching that would contribute to their professional development, the principals and administrators found serious increases in workload, technical design problems, and insufficient guidance from plan developers about the amount and kind of evidence to be addressed. The research suggests the plan failed because of numerous implementation difficulties including inconsistent interpretation of evaluation rubrics, misinformation about quotas, perceptions that the process was disorganized, and lack of training and expertise of evaluators. Teachers found the exercise stressful, burdensome and time-consuming. Ultimately teachers in Cincinnati rejected the link between the evaluation system and the pay system which put their salaries at risk (Ingvarson et al, 2008).

The Kentucky experiment is another example of unintended consequences. The Kentucky Instructional Results Information System (KIRIS) introduced in 1990 rewarded schools for performance improvements. It was a group-based program. On a two year cycle schools received funds, typically \$2000 per teacher, to distribute as salary bonuses if they had exceeded their improvement goals. In addition to the large bonuses the program also featured sanctions if goals were not met. Results were published and unsuccessful schools were publicly labeled a 'school in crisis' or a 'school in decline', allocated additional funds and assigned a distinguished educator to improve student outcomes. The performance indicators employed included student achievement on a number of subjects, attendance and graduation rates.

The Kentucky program was plagued with problems from the start. By 1995 the costs associated with implementing the program had ballooned to \$26 million a year. Additionally, the independent testing contractor made errors in calculating student test scores used to determine awards. This resulted in schools receiving \$2 million dollars more in reward money than they should have. There were numerous complaints of cheating in schools by manipulating results. In some cases it was alleged that teachers were changing students' answers on tests. Some of the allegations were confirmed subsequently by state investigations. Increasingly assessment experts raised questions about the efficacy of emphasizing test results especially as no evidence existed that the

Kentucky incentive experiment led to improved student achievement. In fact, the research evaluating the effect of the program revealed teachers experienced more stress, less freedom to teach, and longer work hours which undermined the motivational power of the bonus pay. In essence it was extra pay for extra work with few results. In summary, the Kentucky experiment can be considered a failure on many counts: in terms of costs; the decline in teacher motivation; the increase of teacher stress and anxiety; in terms of teacher opposition; and in terms of the lack of student improvement (Alberta Teachers' Association, 2000; Harvey-Beavis, 2003; Kelley, 1999, Heneman & Milanowski, 1999; Kelley, Heneman & Milanowski, 2002).

By contrast the Vaughan Charter School initiative has achieved some success. The school had 1200 students and was publicly funded in exchange for accountability results. The initiative began in 1998. Like Cincinnati, the evaluation system was based on performance standards developed by the teaching profession. Evaluators included peers and principals. The main evidence collected was from classroom observations, teacher artifacts, students' work samples, interviews and ratings on 30 or more standards. Rewards were given on the basis of: acquisition of specific skills and knowledge related to the school program; contingency pay for improved student attendance and discipline; management and leadership skills; increased student performance on statewide achievement tests (\$1500 USD); further credentials (Masters Degree \$2000 USD, National Board Certification \$4000 USD).

The Vaughan initiative has persisted. This in itself is a measure of its success. The bonuses were substantial enough to motivate teachers and the range of criteria was perceived by teachers as fair. Moreover, it included a combination of knowledge and skills and not just student test scores. The Vaughan Charter School was a small, homogenous group of teachers and students, in one school, and not a diverse group across a school district or state. This undoubtedly made the implementation of the merit pay program smoother. In the implementation process the school gained key stakeholder approval especially from the teachers. Further it combined group and individual pecuniary incentives. Significantly, in the first five years of the scheme all the teachers received some kind of bonus for the schools' performance in addition to what they received for their individual performance. The majority of teachers felt motivated and wanted the program to continue.

The Denver Pay-for-Performance program is one of the USA's most widely known performance-pay programs. In 1999 Colorado piloted the program in Denver public schools having reached an agreement, in advance, for an alternative teacher pay plan with the Denver Classroom Teachers Association and the Denver Public Schools. They fully implemented the program in 2005. The plan linked teacher pay to student

achievement and professional evaluations. Although the pilot had the support of teachers' unions, rank-and-file teachers were only luke-warm towards it. After two years the pilot had had little impact. Although 89% of teachers had met the objectives which they contributed to creating and received bonuses of \$750USD, teachers did not believe the extra pay led them to work harder because they were doing the same tasks only now they were getting paid for them. In effect the program had simply raised their pay for work they were already doing. Difficulties in measuring students' learning also cropped up. Attributing student performance to the work of individual teachers was also an issue. There were also some unintended positive consequences, including increased focus on student learning, increased collaborative assessment of skills, and increased alignment between the district and school curriculum (Ingvarson et al, 2008; Podgursky & Springer, 2007).

Despite the problems Denver persisted and attempted to rectify them by calling on teachers, principals, administrators and community members to refine the program. As a result of the broad-based consultations the program was made more comprehensive. Pro Comp (Professional Compensation for Teachers Program) was introduced which clearly weighted the program towards a knowledge-and-skills based model with some supplements for student achievement and other market incentives. The revised program included a standards-based teachers' professional learning and evaluation process that had been designed with input from the teachers and aimed to improve their skills and knowledge. The greatest opportunity for pecuniary award rested with a teacher obtaining National Board for Professional Teaching Certification. In this case teachers' associations and the majority of teachers voted in favour of the revised program and it gained union and teacher support because Denver acknowledged the limitations in the pilot and sought wide-ranging stakeholder input to address them. In effect the teachers had significant input into the revised design and became invested in the program (Ingvarson et al, 2008; Podgursky & Springer, 2007).

Nevertheless performance pay schemes similar to the successful Denver and Vaughan programs have failed in Philadelphia, Steamboat Springs and Iowa, meeting resistance and complaints similar to the Cincinnati and Kentucky stories. This tells us that the context of each program is critical to its success or failure.

United Kingdom

In 2000 and 2001 in England and Wales the government introduced performance management systems, known as the *Teacher Incentive Pay Project*, for state school teachers to reward teachers for excellence in the classroom. The system was implemented in two phases. The first phase is known as the 'Performance Threshold' program and the second phase is known as the 'Performance Management' program.

The project combined goal-setting and appraisal with performance pay. It was introduced to address low teacher motivation and difficulties with recruitment and retention attributed to the culture of teaching where performance was not rewarded. Given the centralized governance of education in the UK the reforms were implemented fairly quickly. The plans borrowed heavily from some of the proposals of leading proponents of merit pay in the USA with whom the UK government directly consulted, specifically Odden's work cited in this paper (Chamberlain et al, 2002; Ingvarson et al, 2008).

The first part of the program involved the threshold exercise. Experienced teachers were offered an extended pay scale beyond the top of the old incremental scale. Progression to this upper scale and passing through the 'threshold' depended upon the teacher's successful assessment by school principals. In order to pass through the threshold teachers completed an application form summarizing evidence of their accomplished teaching using examples to show that they had met the required standard developed by the Department of Education and Skills. Supporting evidence had to be available upon request. The assessment process was carried out under the authority of the school governing bodies, who delegated the receipt and assessment of applications to head-teachers. Initially a verification process was implemented involving external reviewers but external verification was discontinued in 2006 due to its expense and the fact that the external reviews, for the most part, were confirming the head-teachers' assessments. Teachers gained immediate pay increases and access to a higher pay scale once they passed the threshold assessment (Marsden & Belfield, 2006; Ingvarson et al, 2008).

The second part of the project, the performance management exercise, involved a regular appraisal process similar to the threshold carried out by head-teachers. Teachers would only receive annual pay increments if they satisfied the requirement of the performance standard at the appropriate level in the annual review process.

The research on the UK experience with the threshold shows that there were great variations in how the program was implemented. Responses to the schemes in England and Wales vary considerably depending on the particulars of implementation of the performance schemes. In general outcomes and reaction to the threshold exercise and performance management exercise in England and Wales were negative from teachers and head-teachers, which seemed to have seriously inhibited the success of the program. Ingvarson et al (2008) state that "Overall the responses indicate a strong, often 'passionate' belief that the new performance management and performance pay initiatives would not raise the standard of student achievement" (p.73). Nevertheless, Atkinson et al (2004), cited in Podgursky and Springer (2007), found that it did improve student test scores gains on average by half a grade per pupil relative to ineligible teachers. Podgursky and Springer (2007) found that the new pay scheme helped teachers

earn significant increases in pay without taking on management responsibilities or having to leave the classroom.

Difficulties around ‘measuring’ the many and complex tasks of teaching was a recurring theme in responses to the threshold exercise in the research. Lack of clarity around what was being measured and who determined it also emerged. Responses indicate that separating out individual teachers’ contributions to student learning (or lack thereof), given all the many teachers and other factors that might have contributed to it, continue as a major complaint (Farrell & Morris, 2004; Storey, 2000).

Storey’s (2000) evaluation of the UK threshold program, and teachers’ attitudes towards it in particular, were confirmed by Farrell and Morris’ evaluation four years later (2004). They describe: teachers felt aggrieved and not valued in the exercise; a lack of communication about the process; a lack of trust between employers and teachers where trust is an essential feature of a successful reward scheme; lack of understanding of the culture of teaching which is antithetical to market employment cultures where performance schemes have a history; the mismatch of the team-like organization of school organization with individual rewards; undermining of team work and the educational ethos.

The research reflects serious reservations about the likely success of the Teacher Incentive Pay Project in England and Wales. Wragg et al (2004) found that 97% of all teachers who applied in the first phase were successful and passed through the threshold casting doubts on the legitimacy of the evaluation process. Further, they found the performance management exercise led to few significant changes to teachers’ classroom routines. There were significant variations between schools in the implementation of the second phase of the program. Nevertheless almost all teachers progressed through the second phase similar to the threshold phase. This alleviated teacher anxieties about the process. Wragg et al concluded that not a great deal had changed since the threshold was implemented. Consistently the majority of head-teachers and teachers were against performance pay (Wragg et al, 2004; see also Chamberlain et al, 2002).

The largest teachers’ union in the UK, the National Union of Teachers (NUT) was the most opposed to the threshold processes and took it to High Court to prevent the process from going ahead but they were not successful. Other teacher unions and associations were moderate in their opposition to aspects of the initiative. The Association of Teachers and Lecturers gave qualified support, while the National Association of Schoolmasters and the Union of Women Teachers agreed with having a gateway for competent teachers to advance and were prepared to negotiate with the government around details of the program. However, they were clear that they opposed some

processes and principles such as linking pay to crude exam results (Wragg et al 2004; Ingvarson, 2008).

Australia

Australia does not have an extensive history of utilizing merit pay programs for teachers. One of the most recent initiatives has been the *Advanced Skills Teacher* (AST) concept that emerged in the late 1980s from award restructuring reforms. These reforms aimed to reward professional development and to improve retention of the best teachers within the profession. Remnants of these programs still exist throughout Australia in some award programs and agreements.

All government schools in Australia work under collective agreements and/or government industrial awards. As with most OECD countries the majority of Australian teachers are on an incremental pay scale that they move up with years of experience. All school systems have positions beyond the top of the incremental scale that involve positions and responsibilities beyond classroom teaching attached to extra pay and reduced teaching. In Australia teachers' salaries plateau very quickly and at a modest level. Salary scales are relatively flat between the top and bottom of the scale. Most teachers are at the top of the scale within 10 years. Progression is not automatic but is not usually withheld. Most schools have annual satisfaction reviews done by school administrators in the form of interviews. Annual increases in pay are based on this annual performance review. These are built into the collective agreement. Once a teacher is at the top of the salary scale this annual review no longer links to salary. Therefore performance pay is not a reality for the majority of teachers in Australian government schools who sit at the top of the pay scale. Thus, it is argued, there is no pecuniary incentive for effective teaching. Further, in Australia there is a lack of recognition for teachers who gain higher and further academic qualification in the Australian system, unlike the USA, which rewards added academic credentials in salary increments.

With the AST program teachers who have reached the highest level in the salary scale can apply to become an Advanced Skills Teacher (AST). Teachers are evaluated on performance-based criteria to determine whether they can pass to a new salary scale with three levels or rewards. The program was designed to reward experienced classroom teachers, and to discourage them from moving out of the classroom and into higher paying administrative positions (Ingvarson & Chadbourne, 1997). While several states had abolished the AST system by 2001, it still exists in many Catholic schools, and in the Northern Territory (Waterreus, 2001).

The AST met with mixed results. Criticisms are similar to those of the United Kingdom's *Teacher Incentive Pay Project*. Ingvarson et al (2008) argue that, while AST was sound conceptually, its implementation was flawed for the following reasons: time and effort to develop credible standards and methods of assessment for teacher performance were underestimated; assessment of performance was left to untrained school panels; inconsistency in assessment across schools and systems resulted which undermined the credibility of the AST process as a method of identification of accomplished teachers; lack of confidence in the reliability of the assessments led most states to advance teachers automatically to the first level; teachers' salaries had declined over the long-term, relative to comparable occupations, so that teachers were not convinced they needed to go through performance assessment to justify a pay raise.

Unintended consequences of several AST schemes were the perverse effect they had on quality teaching. Many programs turned into pay-for-extra-work instead of pay-for-performance. A major reason for their failure was that the programs attached additional administrative responsibilities to the AST positions which took teachers away from their classroom and cut into their teaching time. They simply did not have the time to teach well, which fundamentally undid the concept of professional development. Government commissioned reports by the Victorian Department of Education (2003) reviewing the AST support these views. They found that performance management systems do not work in most schools because the data collected on teacher effectiveness is not objective or independent, schools see the process as cumbersome and of low value and not constructive.

Other studies have found that attitudes towards the annual performance review were generally positive by teachers, principals and senior managers but their purposes were unclear (Kleinhenz et al, 2002). The Australian Education Union (AEU) and the Independent Education Union of Australia (IEUA) strongly support the development of professional standards for teachers with involvement of the profession in their development. They perceived the short-lived AST classification as a move in that direction. Furthermore, longstanding dissatisfaction with the flat salary scale may have contributed to the support of the program which offered a way to move beyond the scale (Ingvarson et al 2008).

CRITICAL ANALYSIS OF OUTCOMES

It is difficult to generalize about the outcomes or 'success' of merit pay programs given the range of the programs within and across jurisdictions. Discussions about their success or failure are meaningless without first identifying which type of program is in place, the objectives of the program, how it was used and what data is being evaluated.

Performance-based reward systems have many variations which makes it difficult to make general statements about their impact. They can vary upon whether a program focuses on individual teacher performance or school-based performance; whether compensation is pecuniary or non-pecuniary; whether sanctions exist for poor performance; the duration of the reward (is it a one-time, limited or permanent award); in reward levels; whether the performance evaluation allows a teacher to progress to a new salary scale; what is evaluated and how it is evaluated (on observation, portfolio, acquired qualifications, or student performance); who evaluates the teacher (principal of the school, an external review or peer review); scope of the reward and whether all teachers who meet the criteria are rewarded or just a specific quota; and whether the performance-based award supplements or replaces the existing salary system (Harvey-Beavis, 2003; Ingvarson, Kleinhenz & Wilkinson, 2008).

In addition merit pay systems are typically imbedded in a range of other education quality and accountability reforms so it is extremely difficult to ascertain how each initiative contributes to educational improvements. Methodological concerns emerge when asserting a causal relationship between merit pay and educational improvements, because it is impossible to control for all the variables in the education system. Moreover, there is no consensus in the research as to what ‘successes’ of merit pay programs look like. The research literature on outcomes takes up a number of indicators. Have the programs persisted? Are they endorsed by constituents, especially the teaching profession? Do they achieve their goals and primary purposes? Do they recruit, retain and motivate teachers? Do they improve teacher performance and quality (however ‘performance’ and ‘quality’ are defined)? Are they cost efficient? Do they increase student achievement? What is their impact on school culture?

Given the breadth of literature around performance-based compensation programs there is a surprising dearth of empirical research evaluating the effects of merit pay programs. That is, do they achieve what they claim to? Most evaluation research on merit pay programs is dated and focused largely on traditional merit pay plans. There is considerably less literature on outcomes of the current forms of performance-based and group school-based plans. What does exist is limited to the USA. Most of the American literature is uncritically biased in favour of merit pay programs and raises considerable concerns about the analysis of the data. Moreover, interpretations of the recent research evaluating the effects of merit and performance-based compensation systems for teacher are contradictory and inconclusive. In general, the outcomes of current merit pay programs for teachers are mixed. Certain programs, in certain jurisdictions, under certain conditions persist while similar programs in other jurisdictions fold. Contextual factors associated with the jurisdiction and the particular program invariably factor into the result.

The importance of context can be found in the Kentucky experience. For example, in Kentucky, the merit pay experiment emerged within a broader context of major education reforms under the Kentucky Educational Reform Act (KERA) in 1990. During the time of the experiment with merit pay, state funding increased by 50% (between 1989-1995), local revenues for education increased by over 50%, education spending doubled, teachers' salaries rose by 20% and the actual number of teachers in the system increased by 8%. At the same time the spending disparity between the poorest and richest districts was reduced by 50% (ATA, 2009). Given the myriad of contextual factors associated with the larger reforms that were happening at the same time as the merit pay experiment it is impossible to determine which factor(s) led to any particular improvements. This is a common criticism of research that purports to evaluate the success of teacher incentive programs when it is impossible to control for the influence of other major educational changes and reforms that were introduced at the same time.

In an OECD literature review of performance-based awards for teachers Harvey-Beavis (2003) offers us a range of potential effects (both positive and negative effects) of performance-based awards.

Table 3 The Potential Effects of Performance-based Rewards

Level	Potential Area of Effect
Teacher	<ul style="list-style-type: none"> • Teacher motivation and effort • Teacher recruitment and attrition • Teacher knowledge and skills • Teacher autonomy
Student	<ul style="list-style-type: none"> • Student performance • Student truancy • Student drop-out
Classroom	<ul style="list-style-type: none"> • Pedagogical techniques • Teacher focus on specific students
School	<ul style="list-style-type: none"> • Collegiality between teachers • Efficiency of resource allocation in schools • The relationship between teachers and school management • School organizational goals
System	<ul style="list-style-type: none"> • Revenue required for teacher salaries and education system • The culture of educators • The form and content of the curriculum
Societal	<ul style="list-style-type: none"> • Public and political support, particularly the publics' perception of the teaching profession

Source

Harvey-Beavis, (2003) Performance-based Rewards for Teachers: A Literature Review

The limitations of early merit pay schemes that linked teacher pay to student achievements on test scores are well documented in the literature (Johnson, 1986; Murnane & Cohen, 1986; Odden & Kelly, 2002). Johnson's (1986) research indicates that early merit pay schemes which link students' standardized test scores to teacher pay had little impact on student achievement. Morrow (1992) goes further and asserts that there is no evidence to support the proposition that pay for performance improves student achievement. Moreover, empirical research suggests that the knowledge and skills being rewarded in input-based (i.e. degrees, education, professional development courses etc) merit pay systems may have a negligible effect on student outcomes (Ballou & Podgursky, 2001; Podgursky & Springer, 2007).

Similarly, research on the effect of merit pay on teacher recruitment, retention and motivation is inconclusive. Most of the empirical studies on motivation focus on non-teaching organizations. One of the most commonly cited studies considering the outcomes of group-based performance awards is Kelley, Heneman and Milanowski's (1999) study of Kentucky and Charlotte-Mecklenburg's school-based rewards programs. In this study it is argued that school-based awards motivated teachers and that this, in turn, had a positive effect on student outcomes. But how they arrived at this conclusion is suspect. The researchers found that the teachers valued the bonuses, which the researchers interpreted to mean that the bonuses may have motivated the teachers in Kentucky although they were not conclusive about this finding. They also concluded that the more highly motivated teachers were likely to be teaching in areas of high student outcomes. From this they concluded that the bonuses were responsible for the student gains. However, the authors themselves acknowledge several methodological problems with their study that compromised the reliability of their conclusions. In addition the work is conceptually problematic as they assert a causal relationship between program and outcomes without demonstrating the link (Harvey-Beavis, 2003). By stark contrast to these findings, Smith and Nickelson (2000) evaluated the outcomes of Charlotte-Mecklenburg and concluded that there was no benefit to the range of reform policies introduced in the 1990s which included performance-based awards for teachers.

The recruitment and retention literature suggests that salary and pecuniary awards are not the prime motivating factors for choosing teaching as a career although an increased base salary (as opposed to performance bonuses) has a positive effect on recruitment and retention of teachers in general (Chamberlain et al, 2002). In fact starting salaries are more important in recruiting newly qualified teachers than the prospect of performance-related pay (Richardson, 1999). This is an argument for increasing base pay rather than siphoning off money by lowering salaries and redistributing it as merit pay. In summary, the available research on motivation, retention and recruitment is inconclusive.

Research evaluating the effects of merit pay demonstrates that implementation and design challenges have led to failures. We also know that the costs of implementing merit pay programs are substantial. Studies suggest that the costs associated with proper implementation including administration, monitoring, appraisal and performance management are significant (Chamberlain, et al 2002; Hatry et al, 1994; Prostik, 1996). Moreover, the prohibitively high costs of implementing and sustaining merit pay programs has been cited in numerous jurisdictions' decisions to drop merit pay plans (Gordes,1983; Prostik 1996; Stedman & McCallion, 2001).

Where merit pay programs have persisted they have evolved away from traditional merit pay plans that link teacher pay to student achievement in a crude fashion and evolved into structures that: reward tasks outside classroom instruction; reward everyone and therefore effectively raise all salaries; are voluntary with low teacher participation; and teachers have been involved in redesigning the plan and the reward structure (Murnane & Cohen, 1986). Moreover these second generation merit pay programs link pay to professional development skills and knowledge using a wide range of evidence and comprehensive standards developed by the teaching profession.

The outcomes of newer programs that have emerged in the last decade are not fully known or documented. For example, group-based pay schemes, in which bonuses are provided to all school staff for schools that meet performance targets, are becoming increasingly popular. There is some evidence of improved student performance in group-based performance awards but their overall success has not yet been conclusively demonstrated (Harvey-Beavis, 2003; Ladd, 1999). The American research suggests that merit pay is most likely to be supported by teachers with low salaries and by ethnic minorities (Ballou & Podgursky, 1993). Socio-economic status of students does not affect teachers' views of merit pay. But private school teachers are more likely to support merit pay schemes than public school teachers. Similarly, a common feature of schools with performance-based awards is the lack of a strong union (Ballou, 2001; Ballou & Podgursky, 1993).

While proponents of merit pay (Odden & Kelley, 1996) argue that strategically focused awards may deepen teachers' knowledge of curriculum and classroom management techniques, Podgursky and Springer (2007) caution that the evaluation literature on the impact of more recent teacher incentive pay on student achievement is very small. They found only eight studies on the causal effects of teacher performance pay on student achievement. Results were mixed. However, there is increasing research that suggests schemes that provide recognition for high teaching standards through pay can improve performance and identify effective teachers (Ingvarson & Kleinhenz, 2006).

The research suggests that most merit pay schemes fail to last because of issues around fair and valid evaluation of teachers. It is essential that teachers recognize the standards against which they are evaluated are a fair and accurate representation of their work. Successful programs must employ multiple trained assessors, often using 'expert' teachers, which increases costs and administrative support. Adequate funding to implement the system and adequate human resources to manage the administrative workload that accompanies their implementation is crucial. The most positive results are achieved when the method used to assess teachers is part of an external certification process that has been professionally vetted and designed. Participation must be voluntary. Awards must be significant enough to be meaningful and to motivate. Merit pay programs that reward group rather than individual performance are less divisive. Implementation is the central critical determinant of outcomes of performance-based pay schemes. The details of the program, funding, workload and the management of stress and anxiety levels all present challenges when merit pay programs are operationalized (Chamberlain et al, 2002; Ingvarson et al, 2008; Odden & Kelly, 1997, 2002; Murnane & Cohen, 1986).

Finally, certification-based performance pay systems are offered as an alternative to merit pay. In these programs teachers receive certification after completing a program endorsed by a professional body. The certification shows the member has attained a specific standard of knowledge. The most successful in terms of persistence and participation has been the National Board of Professional Teaching Standards (NBPTS) in the USA. Created in 1987 it is the best known and most widely used. Most states offer salary increases or bonuses to teachers who gain NBPTS certification. The standards developed are profession-wide and written by teacher 'experts' and not employers. The certification is portable within an education system so teachers are not tied to a job or a position at a school. It is voluntary and certification is available to everyone, although it is costly (over \$2000 USD, but some schools pay for it). Certification is recognized by employers as a credible measure of professional accomplishment. The standards are perceived by teachers as fair but are rigorous. Salary benefits are substantial. Trained peer teachers who have already met the standard in the field of teaching being assessed carry out the assessment under NBPTS supervision. Multiple pieces of evidence are evaluated, including evidence of accomplished teaching consistent with the professional standard and evidence of student learning as a direct result of the teacher's teaching. Research suggests these schemes are not as divisive and do not have a negative effect on staff relations. Also teachers believe it is valuable professional development. By 2006, 120,000 teachers had applied for Board certification, which suggests it may be an alternative to professional development and salary award programs. However, while the American program has been a success in terms of persistence, similar schemes in Scotland and Australia have had mixed reviews, so there is no conclusive evidence on

the overall success of this approach or on its impact on educational improvements. An OECD review of merit pay makes other important qualifications about the limitations of recent evaluation research in this area. Most of the research that presents positive outcomes for merit pay is from the USA. Concerns about the rigor, validity and bias in the studies are numerous. Much of the American literature has also been commissioned by governments or foundations seeking to implement merit pay schemes and the limited empirical evidence presented is uncritically positive about performance-based rewards. By comparison the European and British literature on merit pay is more critical. The author cautions that much more rigorous, empirical research is needed to verify many of the claims made and to document the actual effect of performance-based pay on student outcomes and teacher behaviour (Harvey-Beavis, 2002). Significantly, the OECD's most recent review of education reforms around teacher evaluation in international jurisdictions rejected merit pay as an option stating that bonus pay 'should be approached with considerable caution. The evidence of the overall impact of such extra payments is mixed and can be contentious and potentially divisive' (Santiago et al, 2009, p.9). Instead of merit pay this report recommends focusing on professional development and career advancement, such as rewarding teachers with release-time incentives, sabbatical periods, opportunities for school-based research, support for post-graduate study, or opportunities for in-service education.

CONCLUDING REMARKS

In summary, the generation of traditional merit pay schemes that crudely linked an individual teachers pay to student test scores has been roundly criticized. These early programs proved unsuccessful in terms of persistence, cost effectiveness, teacher motivation, and improving student achievements. The most recent generation of merit pay schemes that have emerged in the last decade have sought to rectify earlier problems. By contrast they are predominantly based on teachers' knowledge and skills and are school-based (group) awards instead of individual teacher awards. Recent schemes are now more complex compensation programs that weave a host of performance indicators, targets, benefits, and school resources together with teachers' salary bonuses. They are often embedded in larger school-based reform programs (as in the case of the three jurisdictions profiled in this paper) making it difficult to isolate and accurately measure the effect of teachers' performance on educational improvements.

There is very little research evaluating whether the latest generation of merit pay schemes have resulted in educational improvements. The few studies that do exist are methodologically flawed because evaluation of the effects of the merit pay alone is exceedingly difficult to tease out from the host of other factors contributing to the educational reform. Moreover, these studies are limited to the USA and are dominated

by individuals who are uncritically positive in their assessments. Not surprising the studies are funded and published by governments, foundations and think-tanks who are proponents of merit pay schemes raising concerns about their objectivity and bias. Even so the research on outcomes of current merit pay plans is mixed and, at best, inconclusive as to their overall success. That is to say, within the limited evidence available there is some suggestion that recent group-based performance awards may benefit student outcomes although more research is needed to confirm these outcomes. There is no evidence that individual merit pay programs improve educational outcomes. Nor is there conclusive evidence regarding the success of the latest generation of merit pay programs in terms of achieving their objectives, cost efficiency, retaining, recruiting and motivating teachers.

Merit pay elicits strong opposition from teachers and teacher associations for many reasons. Research demonstrates that merit pay distorts the broad goals of education by focusing on narrowly defined outcomes. Performance incentives, such as group merit pay, shift already scarce resources to a small set of activities. When these activities involve student achievement measured by high-stakes testing, instruction is diverted, teachers teach to the test, teachers become stressed and anxious, stigmas are attached to schools that do not do well on the test results, morale declines, teachers lose control of the curriculum and pedagogy which diminishes their professional autonomy, and struggling students (often from disadvantaged societal groups) are blamed for low scores and resulting sanctions. This raises equity issues and leads to a ‘blame-the-victim’ mentality in school systems. School-wide merit pay plans pressures teachers to win the prize or dodge the penalty resulting in unintended consequences. Research evaluating US districts using school-based plans uncovered cheating on tests and other kinds of manipulations of results in order to avoid sanctions.

Teachers have also reported that competitive individual merit pay plans decrease motivation and are potentially divisive amongst colleagues. Teachers perceive the evaluation mechanisms associated with merit pay as unfair. Merit pay does not account for the complex, systemic and societal factors that are responsible for educational outcomes. Consequently, teachers are penalized for factors outside their control that we know affect educational achievement, such as parental involvement and socio-economic status. At the same time they are also being rewarded for outcomes over which they have little control, such as improved school performance and student achievement. In effect merit pay obscures the host of factors that influence student performance, not the least of which is the lack of resources to implement innovative strategies for learning. The impact of diminishing government resources is rendered invisible while teachers are held responsible for an ever-expanding range of outcomes.

Historically, the implementation of merit pay has proven time-consuming and expensive. Scarce funds must be diverted from classrooms and teachers' base salaries and redistributed as awards. Rather than increase teachers' salaries across the board and adequately compensate teachers for increasing responsibilities or professional development, merit pay schemes exchange base salaries for bonuses. Not surprisingly they have emerged predominantly in non-unionized environments and in jurisdictions where teacher base salaries are low and pay tops out quickly. For example, in the USA and in Australia merit pay can be seen as a way to get beyond the limitations of the pay scale. This almost certainly accounts for the qualified support from teachers and unions in some jurisdictions.

Finally, merit pay programs introduce private-sector governance strategies and market-like values and compensation schemes into a public sphere. School administration becomes more hierarchal and co-operation between school management and staff is undermined. Merit pay programs that target student performance constrain teacher pedagogy and undermine teacher autonomy and control over work.

Merit pay has emerged in certain international jurisdictions as a response to issues around recruitment, retention and motivation of teachers coupled with nations' desires to improve their international education test scores as in the case of the USA. It is important to remember that Canada's education context differs significantly than that of the USA before we start importing made-in-America merit pay programs for made-in-America problems that do not exist in Canada. Whatever issues our own education system may have Canada ranks very high on international test scores, our students do well. For example, the most recent results of the Program for International Student Assessment (PISA, 2006) place Canada third of 57 participating countries (behind Finland and Hong Kong) and well above the OECD average for participating countries. By contrast the USA placed 29th and was statistically below the OECD average. Even acknowledging that there is always room for improvement, our teaching profession does not suffer from the impoverished working conditions evident in the USA. We do not experience dramatic recurring issues of low recruitment, retention and lack of motivation. The professional status of our teachers is high. In fact, our uniform compensation system has served us well. It encourages teachers towards professional development. It allows for other non-pecuniary incentives that are more attractive to teachers than money, such as unpaid leaves. We already have an excellent system of education and quality teachers and we continue to improve. Our system is not broken and does not need an American-style quick-fix as proffered in teacher merit pay programs.

BIBLIOGRAPHY

- Abelmann, C. H., & Kenyon, S. B. (1996). *Distractions from teaching and learning: lessons from Kentucky's use of rewards*. Washington, D.C.: Office of Educational Research and Improvement.
- Alberta Teachers' Association. (2005). Merit pay issue resurfaces. *The ATA News*, 32(17), 1.
- Alberta Teachers' Association. *Incentives and merit pay –do they work?* Retrieved November 11, 2009 at <http://www.teachers.as.ca/>
- Aseltine, J. M., Faryniarz, J. O., & Rigazio-DiGilio, A. J. (2006). *Supervision for learning: A performance-based approach to teacher development and school improvement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Atkinson, A., Burgess, S., Croxson, B. (2004). *Evaluating the impact of performance-related pay for teachers in England*. University of Bristol: Centre for Market and Public Organization.
- Ballou, D. (2001). 'Pay for performance in public and private schools'. *Economics of Education Review*, 20(1), pp. 51-61.
- Ballou, D., & Podgursky, M. (1993). 'Teachers' attitudes toward merit pay: examining conventional wisdom'. *Industrial and Labor Relations Review*, 47(1), p. 50-61.
- Ballou, D., Sanders, W., & Wright, P. (2004). Controlling for student background in value-added assessment of teachers. *Journal of Educational and Behavioural Statistics*, 29(1), pp. 37-66.
- Belfield, C. R., & Heywood, J. S. (2008). 'Performance pay for teachers: Determinants and consequences'. *Economics of Education Review*, 27, pp. 243-252.
- Bergem, T. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Norway. *Eurydice*, retrieved 29 January 2003 from <http://www.eurydice.org/Documents/KT3tables/en/FrameSet.html>.
- Boe, E. E. (1990). *Teacher incentive research with SASS*. Washington, D.C.: National Center for Education Statistics.

- Brandt, R. M. (1990). *Incentive pay and career ladders for today's teachers: A study of current programs and practices*. Albany, NY: State University of New York Press.
- Burgess, S., Crosson, B., Gregg, P., & Propper, C. (2001). 'Intricacies of the relationship between pay and performance for teachers: do teachers respond to performance related pay schemes?'. *CMPO Working Paper Series No. 01/35*, pp. 1-32.
- Calhoun, F.S. & Protheroe, N.J. (1983) *Merit pay for teachers: Status and descriptions*. Arlington, VA: Educational Research Services.
- Castle, Sharon, & Shaklee, Beverly D. (2006). *Assessing teacher performance: performance-based assessment in teacher education*. Lanham, MD: Rowman & Littlefield Education.
- Chamberlain, R., Wragg, T., Haynes, G., & Wragg, Caroline. (Mar 2002). 'Performance-related pay and the teaching profession: A review of the literature'. *Research Papers in Education: Policy & Practice*, 17(1), pp. 31-49
- Clifton, R., & Holle, P. (January, 2003). 'A merit pay plan for Manitoba's teachers'. *Frontier Centre for Public Policy. Policy Series Report No.15*. (pp. 1-19). Retrieved on October 2, 2009 from www.fcpp.org/pdf/PS15%20Merit%20Pay.PDF
- Clotfelter, C., & Ladd, H. (1996) 'Recognizing and rewarding success in public schools' In Ladd, H. (ed) *Holding Schools Accountable: Performances-Based Reform in Education*, The Brookings Institution, Washington DC.
- Cohen, David K., & Murnane, Richard J. (1985). *The merits of merit pay*. Washington, D.C.: National Institute of Education.
- Cohen, David K., & Murnane, Richard J. (1986). Merit pay and the evaluation problem: why most merit pay plans fail and a few survive. *Harvard Educational Review*. 56(1), 1-17.
- Coolahan, J. (2002). *Draft report: Ireland*, OECD background report: attracting, developing and retaining effective teachers.
- Cutler, T. & Waine, B. (2000) 'Mutual benefits or managerial control? The role of appraisal in performance related pay for teachers' *British Journal of Educational Studies*, 48(2), pp.170-182.

- Dee, T. S., & Keys, B. J. (2004). 'Does merit pay reward good teachers? Evidence from a randomized experiment'. *Journal of Policy Analysis and Management*, 23(3), 471-488. Retrieved on October 3, 2009 from: <http://proquest.umi.com.ezproxy.library.yorku.ca/pqdweb?index=4&did=659594551&SrchMode=3&sid=3&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1254942258&clientId=5220&aid=1>
- Department of Education, Employment and Training (DEET) (2001). Victorian Government Schools: Staff Performance Handbook. Victoria, Melbourne: Department of Education, Employment and Training.
- Devos, G., & Vanderheyden, K. (2002). *Thematic review-Flanders, OECD background report: Attracting, developing and retaining effective teachers*. Retrieved 29 January 2003 from www.oecd.org/EN/document/0,,EN-document-609-5no-21-36392-0,00.html#title1.
- Doukas, C., & Smyrniotopoulou, A. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Greece. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html
- Driscoll, D., Halcoussis, D., & Svorny, S. (2008). Gains in standardized test scores: evidence of diminishing returns to achievement. *Economics of Education Review*, 27(2), 211-220.
- Eberts, R., Hollenbeck, K., & Stone, J. (2002). 'Teacher performance incentives and student outcomes'. *Journal of Human Resources*, 37(4), 913-927.
- Eicher, J., & Chevaller, T. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-France. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html.
- Esteve, J. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Spain. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html
- Farrell, C. & Morris J. (2004). Resigned compliance: teacher attitudes towards performance-related pay in school. *Educational Management Administration and Leadership*. 32(1) pp. 81-104. UK: Sage Publications

- Figlio, D. N., & Kenny, L. W. (2007). 'Individual teacher incentives and student performance'. *Journal of Public Economics*, 91, pp. 901-914.
- Firestone, William A. (1991). Merit pay and job enlargement as reforms: incentives, implementation, and teacher response. *Educational Evaluation and Policy Analysis*. 13(3), pp. 269-288.
- Firestone W. & Pennell J. (1993). 'Teacher commitment, working conditions, and differential incentive policies.' *Review of Educational Research*, 63(4), pp. 489-525.
- Frase, L. (1992). *Teacher compensation and motivation*. Lancaster, PA; Technomic Publishing.
- Glazerman, S., Silva, T., Addy, N., Avellar, S., Max, J., McKie, A., et al. (2006). *Options for studying teacher pay reform using natural experiments*. Mathematica Policy Research, Princeton, NJ.
- Glewwe, P., Illias, N., & Kremer, M. (2003). *Teacher incentives*. NBER Working Paper 9671. Cambridge, MA: National Bureau of Economic Research.
- Goldhaber, D., DeArmond, M., Player, D., & Choi, H. (2008). 'Why do so few public school district use merit pay?' *Journal of Education Finance*, 33(3), 262-289.
- Goldhaber, D.D. (2001) How has teacher compensation changed? In W.J. Fowler (ed) *Selected Papers in School Finance, 2000-2001* (pp.13-40) Washington, D.C: National Center for Educational Statistics.
- Greene, J. (2005). *Getting more bang for CFE bucks*. New York: Manhattan Institute for Policy Research.
- Guernsey, M.A. (1986) *Review of related literature and research: history of merit pay differentiated staffing, and incentive programs* (No. ED267513). Washington, DC: ERIC
- Guppy, N., et al. (2005). *Parent and Teacher Views on Education: A Policymaker's Guide*. Kelowna, BC: Society for the Advancement of Excellence in Education.
- Hanushek, E.A. (1997). Outcomes, Incentives and Beliefs: Reflections on Analysis of the Economics of Schools. *Educational Evaluation and Policy Analysis* (Winter) 19(4):301-08

- Hanushek, E., Kain, J., Rivkin, S. (1999). *Do higher salaries buy better teachers?* Working Paper 7082, National Bureau of Economic Research, Cambridge.
- Harris, D. (2007). *The promises and pitfalls of alternative teacher compensation approaches*. East Lansing, MI: The Great Lakes Centre for Education Research and Practice.
- Harvey-Beavis, O. (2003). 'Performance-based rewards for teachers: A literature review'. A paper presented for the distribution at the 3rd Workshop of Participating Countries on OECD's Activity *Attracting, Developing and Retaining Effective Teachers*. Paris: OECD.
- Hatry, H.P., Greiner, J.M., & Ashford, B.G. (1994). *Issues and cases studies in teacher incentive plans*. (2nd ed.) Washington, DC: The Urban Institute Press.
- Held, F. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Denmark. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html
- Heneman, H. G., & Young, P. (1991). 'Assessment of a merit pay program for school district administrators'. *Public Personnel Management*, 20(1), 35-47.
- Heneman, H. G., III, Milanowski, A., Kimball, S. M., & Odden, A. (2006). *Standards-based teacher evaluation as a foundation for knowledge- and skill-based pay*. *CPRE Policy Briefs*. University of Pennsylvania, Consortium for Policy Research in Education.
- Heneman, Herbert, & Milanowski, A. (1999). Teachers attitudes about teacher bonuses under school based performance award programs. *Journal of Personnel Evaluation in Education*. 12(4), pp. 327-341.
- Hess, F., & Castle, J. (2008). 'Teachers pay and 21st-century school reform'. *American Enterprise Institute*, pp. 68-75.
- Hodge, W. A. (2003). *The role of performance pay systems in comprehensive school reform: considerations for policy making and planning*. Lanham, MD: University Press of America, Inc.
- Hoerr, T. (1998). 'A case for merit pay' *Phi Delta Kappan*, 80 (4), pp. 326-27

- Holt, M. (2001). 'Performance pay for teachers: the standards movement's last stand?' *Phi Delta Kappan*, 83(4) pp. 321-317.
- Honavar, V. (2007). Legislature votes to replace merit pay system in Florida. *Education Week*, 26(29) p.16 March 28.
- Ingvarson, L., Kleinhenz, E., & Wilkinson, J. (2008). 'Research on performance pay for teachers'. *Australian Council for Educational Research Ltd (ACER PRESS)*, pp. 1-150.
- Ingvarson, L. & Chadbourne, R. (1997). Reforming teachers' pay systems: the advanced skills teacher in Australia. *Journal of Personnel Evaluation in Education*, 11, pp. 17-30.
- Jeuthe, E. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Germany. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html.
- Johnson, S.M. (1986). Incentives for teachers: what motivates, what matters. *Educational Administration Quarterly*, 22(3), 54-79.
- Johnson, S.M. (1984). Merit pay for teachers: a poor prescription for reform. *Harvard Educational Review*, 54(2), 175-185.
- Kelley, C. (1999). The motivational impact of school-based performance awards.' *Journal of Personnel Evaluation in Education*, 12(4), pp.309-26.
- Kelley, C., Heneman, H., III, & Milanowski, A. (2000). *School-based performance Award programs, teacher motivation, and school performance: findings from a study of three programs*. CPRE Research Report Series. Philadelphia, PA: Consortium for Policy Research in Education.
- Kelley, C., Heneman, H., & Milanowski, A. (2002). Teacher motivation and school-based performance awards. *Education Administration Quarterly*, 38(3), 372-401.
- Kelley, C., & Protsik, J. (1997). Risk and reward: perspectives on the implementation of performance. *Journal of Public Economics*, 91(5-6), 901-914.
- Kelley, C. (2001). What do we really know about school based performance award programs? U.S. Experiences. *Orbit*, 32(1), 1- 21.

- Kim, E., & Han Y. (2002). *Background Report: Korea*, OECD Background report: Attacking, developing and retaining effective teachers, Korean Educational Development Institute.
- Kleinhenz, E., Ingvarson, C.C., Chabbourne, (2002). *Evaluating the work of teachers in Australian schools: vision and reality*. Paper presented at the AARE Conference, De 2002, Brisbane.
- Kleinhenz, E., & Ingvarson, L. (2004). Teacher accountability in Australia: current policies and practices and their relation to the improvement of teaching and learning. *Research Papers in Education*, 19(1), 31-49.
- Kohn, A. (1993). *Punished by rewards*. New York: Houghton Mifflin
- Kohn, A. (1997). Disincentive. *Canadian Human Resources Reporter* (June 11):11-13.
- Kohn, A. (1998). *What to look for in the classroom*. San Francisco: Jossey-Bass.
- Kotásek, J., Valenta, J., & Brožová, S. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education- Czech Republic. *Eurydice*, Retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/enFrameSet.htm
- Ladd, H. F. (1996). *Holding schools accountable: performance-based reform in education*. Washington, DC: The Brookings Institution.
- Lavy, V. (2007). 'Using performance-based pay to improve the quality of teachers'. *The Future of Children*, 17(1), p. 87-109.
- Ladd, H. (1991). The Dallas School accountability and incentive program: an evaluation of its impacts on student outcomes. *Economics of Education Review*, 18(1), pp.1-16.
- Lavy, V. (2004). *Performance pay and teachers' efforts, productivity and grading ethics*. Working Paper No. 10622. Cambridge, MA: National Bureau of Economic Research.
- Linag, X. (1999). *Teacher pay in 12 Latin American Countries: how does teacher pay compare to other professions, what determines teacher pay, and who are the teachers?* (LCSHD Paper Series No 49). The World Bank, Latin America and the Caribbean Regional Office, Human Development Department

- Liu, M., Murphy, R., Tao, R., & An, X. (2009). Education management and performance after rural education finance reform: evidence from Western China. *International Journal of Educational Development*, 29(5), pp. 463-473.
- Luukkainen, O., & Eurydice F. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Finland. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documnets/KT3tables/en/FrameSet.html.
- Mahony, P., Menter, I., & Hextall, I. (2004). The emotional impact of performance related pay on teachers in England. *British Educational Research Journal*, 30(3), pp. 435-456.
- Malen, B. (1999). 'On rewards, punishment, and possibilities: teacher compensation as an instrument for education reform'. *Journal of Personnel Evaluation in Education* 12(4), pp. 387-94.
- Marsden, D. & Belfield, R. (2006). *Pay for performance where output is hard to measure: The case of performance pay for teachers*. London School of Economic Research Online at <http://eprints.lse.ac.uk/archive/00000850>
- McCabe, M. (2005). Weighing the merits: several states are implementing pay-for-performance plans. *Teacher Magazine*, 16(5), p. 22.
- Merit pay: examination of the proposal made by the standing committee on public accounts of the parliament of Canada, review of the theory, research and practice (2003). Retrieved on October 2, 2009 from: www.ucco-sacc.csn.qc.ca/MGACMS-Client/Protected/File/7HF7755QX713V16D833B95U6YCKN8I.pdf
- Monyatsi, Pedzani Perci. (2009). A critical analysis of the mechanisms and procedures that facilitate effective teacher appraisal in Botswana Schools." *Educational Research and Review*, 4(4), 183-194.
- Morrow, S.Y. (1992). *A study of student achievement results using eclectic teacher pay-for-performance models*. Dissertation: Baylor University.
- Murphy, S. (2001). "No one has ever grown taller as a result of being measured" Revisited: More Educational Measurement Lessons for Canadian. In Portelli, J. and Solomon P. (Eds) (2001). *The Erosion of Democracy in education: From critique to possibility in education*. Calgary: Detselig Enterprises Ltd. pp. 145-169.

- National Association of Head Teachers. *School teachers' pay and conditions document and guidance on school teachers' pay and conditions*.
www.teachernet.gov.uk/management/payandperformance/pay/
 National Center on Performance Incentives.
www.performanceincentives.org/statebystate_resources/index.asp
- Odden, A. (2000a) 'New and better forms of teacher compensation are possible,' *Phi Delta Kappan*, 81(5), pp.361-66
- Odden, A. (2001) 'Defining Merit', *Education Matters*, 1(1), pp.16-24.
- Odden, A. (2000b) 'Paying Teachers for Performance' *School Business Affairs*, June pp. 28-31.
- Odden, A., & Kelley, C. (2002). *Paying teachers for what they know and do: New and smarter compensation strategies to improve schools*. California: Corwin Press, Inc.
- OECD. (2002). *Education at a glance: OECD indicators 2002*. Paris.
- OECD. (1997). *Performance pay schemes for public sector managers: An evaluation of the impacts* (Public Management Occasional Papers No. 15). Paris, France.
- OECD (2006). *PISA 2006 results: science competencies for tomorrow's world*. OECD, Paris.
- Packard, R. D., & Dereshiwsky, M. I. (1989). *A preliminary planning document based on long-range research & evaluation of the pilot-test career ladders teacher performance & incentive programs. Educational Reform in Arizona: 1985-1990*. Arizona: Northern Arizona University.
- Philips, S. M. (2002). 'Teacher quality in Canada'. *SAEE Research Series, No. 12*, pp. 1-117.
- Podgursky, M. (2007) Teams versus bureaucracies: personal policy , wage-setting, and teacher quality in traditional public, charter and private schools. In M Berends, M.G. Springer & H. Walberg (eds). *Charter School Outcomes*. Mahwah, N.J. Lawrence Erlbaum Associates.
- Podgursky, M. J., & Springer, M. G. (2006). 'Teacher performance pay: A review'. *National Center on Performance Incentives*. pp. 1-52.

- Podgursky, M., & Springer, M. G. (2007). 'Credentials versus performance: review of the teacher performance pay research'. *Peabody Journal of Education*, 82(4), 551-573.
- Podgursky, M. J., & Springer, G. (2007). Teacher performance pay: a review. *Journal of Policy Analysis and Management*. 26(4), 909-49.
- Prostik, J. (1996) History of teacher pay and incentive reforms. *Journal of School Leadership*, 6, 3, 265-89.
- Raham, H. (2000). Cooperative performance incentive plans. *Peabody Journal of Education*, 75(4), 142-158.
- Raham, Helen, et al. (2008). *Beyond the grid: A Canadian look at the terrain of teacher compensation*. Kelowna, B.C.: Society for the Advancement of Excellence in Education.
- Ramirez, A. (2001) 'How merit pay undermines education.' *Education Leadership*, 58 (5), pp. 16-20.
- Richardson, R (1999a). *Performance-related pay in schools: an assessment of the Green Paper*. London: NUT
- Robelen, E. W. (2009). Obama echoes Bush on education ideas. *Education Week*, 28(28), 18-19.
- Santiago, P., Roseveare, D., van Amelsvoort, G., Manzi, J., & Mathews, P. (2009) *Teacher Evaluation in Portugal*. OECD, Paris.
- Santibanez, L. (2006). Why we should care if teachers get A's: teacher test scores and student achievement in Mexico. *Economics of Education Review*, 25(5), 510-520.
- Santibanez, L., Martinez, J. F., Datar, A., McEwan, P. J., Setodji, C. M., & Basurto-Davila, R. (2007). *Breaking ground: analysis of the assessment system and impact of Mexico's teacher incentive program " Carrera Magisterial."* Santa Monica, California.
- Schratz, M., & Resinger, P. (2001). National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-Austria. *Eurydice*, Retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html.

- Sederberg, C. H., & Clark, S. M. (1990). Motivation and organizational incentives for high vitality teachers: a qualitative perspective. *Journal of Research and Development in Education*, 24(1), pp. 6-13.
- Shanahan, T. (2009) *Accountability initiatives in higher education*. OCUFA conference, January 23-24, 2009, Toronto
- Smith, S. & Mickelson, R. (2000). All that glitters is not gold: school reform in Charlotte-Meckleburg. *Education Evaluation and Policy Analysis*, 22(2), pp.101-127.
- Society for the Advancement of Excellence in Education. (2002). *Teacher quality in Canada*. Kelowna, BC: Phillips, Susan M.
- Solomon, L. C., & Podgursky, M. (2000). *The pros and cons of performance-based compensation*. Santa Monica, CA: The Milken Family Foundation, pp. 1-30.
- Solmon, L. C. (2004). What's fair about performance pay? *Phi Delta Kappan*, 85(5), 407-408.
- Southern Regional Education Board. (1990). *Paying for performance-important questions and answers. The 1989 SREB Career Ladder Clearinghouse Report*. Atlanta, Georgia: Office of Educational Research and Development.
- Springer, M. G., & Winters, A. Chabbourne. (2009). *The NYC teacher pay for performance program: early evidence from a randomized trial*. Civic Report No. 66. New York: Centre for Civic Innovation.
- Stedman, J. B., & McCallion, G. (2001). 'Performance-based pay for teachers'. *Congressional Research Service*, pp. 1-20.
- St-Onge, S. (2000). 'Variables influencing the perceived relationship between performance and pay in a merit pay environment'. *Journal of Business and Psychology*, 14(3), pp. 459-479.
- Storey, A. (2000) A leap of faith? Performance pay for teachers. *Journal of Education Policy*, 15(5) pp. 509-523.
- Strath, A. (2004). *Teacher policy reforms in Sweden: the case of individualized pay*. UNESCO: International Institute for Educational Planning.

Svidal, S. (2006). *Government to discuss merit pay*. The Alberta Teachers' Association. Vol. 32 (No 18)

Teacher Advancement Program. <http://www.everychildprepared.org/docs/appendixi.pdf>

Tomlinson, H. (2000) 'Proposals for performance related pay in English schools' *School Leadership and Management*, 20(3), pp. 281-298

Vossensteyn, H. (2001) National summary tables on the reforms of the training and conditions of service of teachers in lower secondary education-The Netherlands. *Eurydice*, retrieved 29 January 2003 from www.eurydice.org/Documents/KT3tables/en/FrameSet.html

Waterreus, J. (2001). *Incentives in secondary education*. Amsterdam: Max Goote.

Wragg, E.C., et al. (2004). *Performance pay for teachers: the views and experiences of teachers and heads*. London: Routledge-Farmer.

Zimmerman, S. (2003). Five steps for improving teacher evaluation: focusing on the continual improvement of teaching and learning. *The Professional Educator*, 25(2), 43-53.

APPENDIX

Table 1: Summary of Performance-Based Reward Programs in OECD Countries

Source: Adapted from Harvey-Beavis, Owen, (2003). *Performance-Based Rewards for Teachers: A Literature Review*. Melbourne, Australia: Organization for Economic Co-operation and Development.

Country or State	Type of Teacher Remuneration/Evaluation	
	Outline of the System	Classification of the System
Australia	<p>Teachers who have reached the highest level in the salary scale can apply to become an Advanced Skills Teacher (AST). Teachers are evaluated on performance-based criteria to determine whether they can pass to a new salary scale with three levels or rewards. It was designed to reward experienced classroom teachers, and to discourage them from moving into administrative positions (Ingvarson and Chadbourne, 1997). While several states had abolished the AST system by 2001, it still exists in many Catholic schools, and in the Northern Territory (Waterreus, 2001). However, many states now use performance-based evaluation for movement up the salary scale. For example, in the state of Victoria, progression up the salary scale for government school teachers is dependent on successful performance evaluation. The principal evaluates the teacher based on a pro-forma and decides whether they progress to the next salary scale increment (DEET, 2001).</p>	<p>The AST System</p> <ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; • Mixed duration depending on the state jurisdiction; • Evaluated on a range of criteria; • Evaluated by classroom observation and peer review; • Mixed availability, as some states introduced a quota, while others did not; and • Created an additional salary scale <p>The Victorian System</p> <ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; • Permanent reward on progression to the next salary scale increment; • Evaluated on the basis of a pro-forma; • Evaluated by their principal, • All teachers are entitled to apply; and • Supplements the salary scale.
Belgium (Flemish Community)	<p>Every teacher must be evaluated once every three years on criteria established by their job description. This can be used to reduce pay, or for dismissal. (Devos & Vanderheyden, 2002).</p>	<p>Evaluated individually; Pecuniary sanctions; and all teachers are evaluated.</p>

<p>Denmark</p>	<p>Since 1999, teachers' wages have been determined by four factors: a basic wage, a function wage, a qualification wage, and a results wage. The results wage is based on the attainment of quantitative and qualitative results, and operates as an individual performance-based reward (Held, 2001).</p>	<ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; and • Evaluated by multiple criteria.
<p>France</p>	<p>Teacher compensation is dependent on experience and performance-based evaluation. The 'head of the school' (40%) and an outside 'inspectorate' (60%) award the evaluation component. The 'head of school' mark is awarded annually based on the principal's evaluation, but the 'inspectorate' mark for pedagogical competency occurs infrequently, with often ten years between evaluations (Waterreus, 2001). This system is currently under review, and the Monteil Report makes a number of suggestions for future systems of teacher evaluation. These include;</p> <ul style="list-style-type: none"> • A change in the role and methods of supervision • Evaluation based on an activity report, itself produced periodically by teachers; • Closer coordination of evaluation with in-service teacher training; • The supervision and support of new teachers by a tutor (Eicher & Chevailler, 2001). 	<ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; • Ascending rewards based on individual performance and experience; • Mixed evaluation methods; • Evaluated by an outside reviewer and a by the principal; • Available to all teachers who successfully complete the evaluation; and • Supplements the existing salary scale.
<p>Germany</p>	<p>The Bundesbesoldungsgesetz creates a link between progression up the salary scale and teacher performance (Jeuthe, 2001). Performance as well as seniority is considered before teachers progress to the next increment (Waterreus, 2001).</p>	<ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; • Permanent rewards; and • Is available to all teachers who fulfill the criteria.

<p>Korea</p>	<p>Korea has merit-pay for ‘teachers of excellent educational activities’, which provides a hypothetical performance bonus in education. In practice only 10% of the bonus is paid differentially based on teacher evaluation (Kim and Han, 2002), meaning performance evaluation does not affect teacher compensation considerably.</p>	<p>The small portion of revenue that is distributed differentially can be categorized as:</p> <ul style="list-style-type: none"> • Individually evaluated; • Pecuniary rewards; • Used as a bonus; and • Supplements the salary scale
<p>Mexico</p>	<p>Mexico’s Carrera Magisterial Programme is a voluntary, individually-based performance pay system. Participating teachers from primary and secondary schools are subject to an annual global evaluation, with salary increases linked to this evaluation. By 1997, 50% of teachers were participating in this programme (Liang, 1999).</p>	<ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; and • Have annual performance evaluations.
<p>New Zealand</p>	<p>A system of individual performance-based pay is used. Teachers progress along the salary scale based on performance, experience and formal qualifications. In practice, most teachers will pass the performance criteria. If the budget for teacher salaries is not limited, teachers receive automatic promotions (Waterreus, 2001). Broad performance criteria are determined by the education department, but the application of specific performance indicators is left for each school to determine. Despite this, the assessment process has to include a range of evaluation methods, including classroom observation, self appraisal, and an annual interview (Waterreus, 2001).</p>	<ul style="list-style-type: none"> • Evaluated individually • Pecuniary rewards; • Permanent rewards; • Ascending levels of reward based on experience, qualifications and performance; • Evaluated through a range of techniques including observation, portfolios and self report; • Evaluators include the individual teacher, and the principal; and • Provides al reward to all teachers who fulfill the criteria.
<p>Sweden</p>	<p>The Bundesbesoldungsgesetz creates a link between progression up the salary scale and teacher performance (Jeuthe, 2001). Performance as well as seniority is considered before teachers progress to the next increment (Waterreus, 2001).</p>	<ul style="list-style-type: none"> • Evaluated individually; • Pecuniary rewards; • Permanent rewards; and • Is available to all teachers who fulfill the criteria.

<p>Sweden</p>	<p>Sweden has a small component of informal, individual performance-based evaluation. For the first five years of service, teachers have a yearly pay increase, regardless of performance. Any further pay increases are centrally determined, and schools are free to give individual pay increases, on government and school-based criteria. This potentially constitutes a limited, but internal performance evaluation. There is little incentive for schools to deny salary increases (Waterreus, 2001). In practice, this means that after teachers progress to the top of the centrally determined salary scale in Sweden, the school determines any further salary increases based on individually established criteria (OECD, 2002), which can incorporate performance-based measures.</p>	<p>Classification under the categories outlined in section 2 is difficult because of the limited component of performance-based rewards in the formal system. However, some characteristics are:</p> <ul style="list-style-type: none"> • Individually evaluated; • Pecuniary rewards; • Permanent rewards; and • Supplements the existing salary scale. <p>Despite this classification, it is unclear how this system can be categorized, given that a range of criteria can be used to measure performance. Potentially, the Swedish system can operate as a merit-pay or knowledge and skill pay system.</p>
<p>United Kingdom (England and Wales)</p>	<p><i>The Threshold Assessment.</i> Once a teacher progresses to the top of the salary scale, they can take a performance-based test to advance to a new salary scale. There are sixteen criteria that need to be successfully met for transition beyond the threshold (Tomlinson, 2000; Cutler & Waine, 2000).</p>	<ul style="list-style-type: none"> • Individually evaluated; • Pecuniary rewards; • Permanent rewards; • A single reward level allowing transition to a new salary scale; • A large range of criteria evaluated; • Evaluated by external and internal review; and • Is available to a quota of about 25,000 teachers per year.
	<p><i>Fast tracking.</i> This allows talented teachers to progress quickly through the salary scale. On successful completion of performance-based criteria, fast track teachers can progress two salary scale points per year, instead of the traditional one. This has a significant implication for teacher salary and teacher progress, as time taken to reach the threshold can be hypothetically halved (Tomlinson, 2000). Selected candidates are given a bursary of £5,000, with an expectation that their subsequent performance will increase substantially.</p>	<ul style="list-style-type: none"> • Individually evaluated; • Pecuniary and intrinsic rewards; • Limited duration; • Ascending levels of rewards, and • Supplements the existing salary scale.

<p>United Kingdom (England and Wales)</p>	<p><i>Advanced Schools Teachers.</i> These teachers have a special salary spine, and are required to exhibit outstanding skills based on excellent student outcomes, excellent subject knowledge, excellent ability to plan, excellent ability to assess, and excellent ability to support other teachers (Tomlinson, 2000).</p>	<ul style="list-style-type: none"> • Individually evaluated; • Pecuniary rewards; • Centrally determined, wide ranging criteria based on demonstrated skills and knowledge; • Ascending levels of reward; and • Has a new salary scale.
<p>United States, Douglas County, Colorado</p>	<p>Teacher salary consists of a base pay, and several bonuses:</p> <ul style="list-style-type: none"> • Knowledge based pay; • Performance-based pay measured on experience and evaluation; • Outstanding teacher awards; • Skill blocks; • Group incentive pay, and • Site based responsibility pay. <p>(Tomlinson, 2000, pp. 295-96).</p>	<p>This pay structure is varied and encompasses several performance- based reward strategies. This system has components of merit pay, school-based pay and knowledge and skill pay. There are multiple reward levels, multiple criteria for evaluation, and multiple evaluators.</p>
<p>United States, Kentucky</p>	<p>Kentucky has a system of school based performance awards. Teachers are provided with salary bonuses based on student performance (Tomlinson, 2000). Schools are measured on an index of student assessment scores covering seven academic areas (reading, writing, math, science, social studies, arts/humanities, and vocational/ practical living) and school-level indicators including drop-out rates, school attendance and transition to a successful adult life. Poorly performing schools are allocated additional funding, labeled as a ‘school in decline’ or a ‘school in crisis’, and have a ‘Distinguished Educator’ assigned to improve student outcomes (Kelley, Heneman & Milanowski, 2002). Kentucky also has a performance-based teacher licensing system (Odden, 2000b).</p>	<ul style="list-style-type: none"> • Group-based evaluation; • Pecuniary rewards, and non-pecuniary sanctions; • Rewards allocated every two years as a bonus; • Several levels of rewards and sanctions based upon whether schools reach their performance goals; • Evaluated on the basis of ‘added value’ to student test scores; • Evaluation carried out by external review; • All schools who reach their performance target are rewarded; and • Supplements the salary scale.

<p>United States, North Carolina</p>	<p>The district of Charlotte-Mecklenburg has a school based performance award programme which evaluates student achievement in nine areas: reading, writing, math, social studies, primary grade readiness, higher level course enrolment, end-of-course subject mastery, attendance and drop-out rates (Heneman and Milanowski, 1999). High achieving schools are given maintenance goals; other schools are given improvement goals. Teachers earn a bonus of between \$750 and \$1000 (Kelley, Heneman & Milanowski, 2002).</p>	<ul style="list-style-type: none"> • Group-based evaluation; • Pecuniary rewards; • Rewards distributed annually as a bonus; • Single level of reward; • Evaluated on the basis of ‘added-value’ to student performance; • Evaluated by an external review; • Rewarded to all teachers who fulfill the criteria; and • Supplements the existing salary scale.
<p>United States, Cincinnati, Ohio</p>	<p>Performance-based teacher-licensing systems (Odden, 2000b). Cincinnati is introducing a plan that will include knowledge and skills based salary bonus, and a school-wide bonus for student outcomes (Odden, 2001).</p>	
<p>United States, South Carolina</p>	<p>South Carolina has a school-based performance award programme (Heneman and Milanowski, 1999). Student academic performance, taking into account past academic results, is used to determine school effectiveness. Schools are placed in one of four categories depending on socio-economic indicators. Within each group the top 25% of schools and the top 25% of all schools who ‘exceeded expectations’ get a bonus that distributed to the staff (Clotfelter & Ladd, 1996).</p>	<ul style="list-style-type: none"> • Group-based evaluation; • Pecuniary rewards; • Annually rewarded bonuses; • Single reward level; • Evaluated on the basis of ‘added value’ to student outcomes; • Evaluated by external review; • A quota of schools are rewarded; and • Supplements the salary scale.
<p>United States, Texas</p>	<p>The Dallas Independent School District uses school based-performance awards. Success is determined by a complex student ‘added value’ test scores, taking into account the racial and socio-economic status of students. The top 20% of schools are awarded bonuses of \$1000 US per teacher per year (Waterreus, 2001), and the next 30% of schools are given \$425 US per teacher (Clotfelter & Ladd, 1996).</p>	<ul style="list-style-type: none"> • Group-based evaluation; • Pecuniary rewards; • Annual bonus; • Two reward levels based upon the magnitude of the mean ‘added value’ of student test scores; • Determined by external review; • Rewards a quota of schools; and • Supplements the salary scale.

Table 2. Selected Major Performance-Based Pay Programs in the United States

Source: Podgursky, Michael J., & Springer, Matthew G. (2007). Teacher Performance Pay: A Review. Journal of Policy Analysis and Management, 26(4), pp. 909-49.

Name of Plan	Target	Size of Bonus	Size of Program	Year of Inception	Funding Source
<p>Denver's Professional Compensation System for Teachers (ProComp)</p>	<p>Teacher Award Program</p>	<p>Knowledge and Skills: \$1,000 tuition credit for professional development coursework; 2% salary index bonus for completing courses and demonstrating skills (\$659); 9% salary index bonus for taxpayers NBPTS certification (\$2,967) Professional Evaluation: Salary increase of 3% index for satisfactory evaluation of non-probationary teacher (\$989) Student Growth: 3% sustainable increase for CSAP goal completion (\$989); bonus of 2% index for "distinguished" schools (\$659); bonus of 1% for meeting one of two goals (\$330) Market Incentives: 3% index bonus for (\$989) or (\$989) assignments Total Bonus Range: \$330–\$7,582</p>	<p>Pilot program operated in 16 schools</p> <p>Scaled-up program implemented district-wide</p>	<p>Pilot program operated from 1999 to 2004</p> <p>Scaled-up program implemented district-wide in 2005</p>	<p>Scaled-up program locally-funded following a \$1 million levy approved by taxpayers</p>

Name of Plan	Target	Size of Bonus	Size of Program	Year of Inception	Funding Source
Florida's Merit Award Program (MAP)	Teacher and Administrator Award Program	<p>At least 5%, no more than 10%, of the average teacher salary for the district</p> <p>At least 60% of the award must be based on student performance</p> <p>Up to 40% of funds may be used to award professional practices, as measured by principal assessment</p>	\$147.5 million	Replaced Florida's Special Teachers Are Rewarded (STAR) Program in March 2007	State funded by the Florida Education Finance Program (FEFP)

Name of Plan	Target	Size of Bonus	Size of Program	Year of Inception	Funding Source
<p>Texas Governors' Educator Excellence Award Grants</p> <p>Governor's Educator Excellence Grant</p> <p>Texas Educator Excellence Grant</p> <p>District- Level Grants Program (to be named)</p>	<p>Includes three major initiatives</p> <p>1.School Award Program</p> <p>Schools must be in top third of schools in percentage of economically disadvantaged students and have performance rating of either Exemplary or Recognized, or must be in the top quartile of TEA's comparable Improvement measure</p>	<p>School-based awards range from \$40,000 to \$290,000 per year based on student enrollment</p> <p>Texas Education Agency recommends individual teacher awards range from \$3,000 to \$10,000</p> <p>School-based awards range from \$60,000 to \$220,000 per year based on student enrollment</p> <p>75% of award must be paid to full-time classroom teachers based on a variety of objective measures of student performance (Part I)</p> <p>25% to all school personnel, including principals, and/or professional development activities (Part II funds)</p> <p>School-based awards range from \$40,000 to \$290,000 per year based on student enrollment</p>	<p>The three programs will include approximately 1300 schools and \$330 million per annum</p> <p>Approximately 100 schools are eligible</p> <p>\$10 million annually through 2008</p>	<p>Program was announced in 2006</p> <p>Pilot program was implemented in 2006</p>	<p>A combination of state and federal funds</p> <p>Pilot program is funded through federal appropriations</p>

Name of Plan	Target	Size of Bonus	Size of Program	Year of Inception	Funding Source
<p>Texas (continued)</p>	<p>2. School award program</p> <p>Schools must be in top half of schools in percentages of economically disadvantaged students</p> <p>3. District Award Program</p> <p>All school districts are eligible</p>	<p>75% of award must be paid to full-time classroom teachers based on a variety of objective measures of student performance (Part I)</p> <p>25% to all school personnel, including principals, and/or professional development activities (Part II funds)</p> <p>District-based award that is contingent upon district and school size</p> <p>60% of funds to directly award classroom teachers</p> <p>40% of funds go to other personnel stipends and/or TAP implementation</p>	<p>1,163 schools are eligible during the 2006-2007 school year</p> <p>\$100 million annually through 2009</p> <p>\$230 million annually through 2010</p>	<p>Program was implemented during the 2006-2007 school year</p> <p>Program will be implemented in 2008 school year</p>	<p>Program is funded through state appropriations</p> <p>State funded</p>

Name of Plan	Target	Size of Bonus	Size of Program	Year of Inception	Funding Source
Minnesota's Q-Comp	Schools receive funds to award teachers for excellence in student achievement	Districts receive \$260 per student to implement program	\$86 million Currently in 22 districts with 134 additional districts expected by 2008 school year	N/A	State funded
Milken Family Foundation's Teacher Advancement Program (TAP)	Individual Teachers	Master Teachers: \$5,000 to \$11,000 Mentor Teachers: \$2,000 to \$5,000 There is a range in the size of performance bonuses-TAP recommends school average bonus of \$2,500 per teacher	<ul style="list-style-type: none"> • 9 states totaling approximately 50 school districts • 10 additional states are actively pursuing implementation 	N/A	N/A