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Pay for performance where output is hard to measure: the case of performance pay for school teachers.[1]

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Abstract

The introduction of performance-related pay with Performance Management in the state school sector of England and Wales represents a considerable change in the school management system. After 2000, all teachers were subject to annual goal setting performance reviews. Experienced teachers were offered an extended pay scale based on performance instead of seniority, and to gain access to the new upper pay scale, teachers had to go through a 'threshold assessment' based on their professional skills and performance. This paper reports the results of a panel survey of classroom and head teachers which started in 2000 just before implementation of the new system, and then after one and after four years of operation. We find that both classroom and head teacher views have changed considerably over time, from initial general skepticism and opposition towards a more positive view, especially among head teachers by 2004. We argue that the adoption of an integrative bargaining approach to performance reviews explains why a growing minority of schools have achieved improved goal setting, and improved pupil attainments as they have implemented performance management. Pay for performance has been one of the measures of organizational support that head teachers could bring to induce changes in teachers' classroom priorities. We argue that the teachers' case shows that a wider range of performance incentives than previously thought can be offered to employees in such occupations, provided that goal setting and performance measurement are approached as a form of negotiation instead of top-down.

1. Introduction

In theory, school teachers should be among the least suitable groups for linking pay to performance. Nevertheless, despite strong initial opposition among teachers and their unions, and equally strong scepticism from academic economists (eg. Richardson 1999, Dolton et al. 2003), the pay for performance system for school teachers in England and Wales, introduced in 2000, appears to be gaining acceptance among teachers. In schools where it is practiced systematically, there is evidence that it is leading to improved goal setting, and to faster improvements in pupil performance than in other schools. This article seeks to explain how this came about. In doing so, it argues that we need to broaden current theories linking pay to performance, and consider the way performance is defined, through goal-setting and the potential element of individual negotiation in this process.

One of the key limitations of existing theory is that it has focused on a narrow range of types of output-based pay, such as for semi-skilled workers, sales staff and senior managers, where performance is more easily measured. In his *Journal of Economic Literature* review of current research on the subject, Prendergast (1999) urged us to look beyond such groups for a wider understanding of pay and incentives for other kinds of employees. In contrast to the former occupations, and like many other public service workers, school teachers, of whom there are nearly half a million in the UK, have proved a challenge for motivation by conventional forms of pay for performance. The nature of their work is 'imprecise'. It does not comprise a set of well-defined techniques that have to be consistently applied, and there is, at best, a loose relationship between particular actions and their students' learning (Murnane and Cohen, 1986). In this respect, their work could be said to differ fundamentally from that which has provided the strongest demonstrations of how output-based pay can boost performance, such as Lazear's windshield replacers at Safelite (Lazear 1996). Not only is their work 'imprecise', but frequently it involves a range of different kinds of activities, some of which are more amenable to measurement than others, for example, students' national test results versus educating future citizens. Their work often involves a great degree of interdependency. Even if one can isolate an individual teacher's classroom contribution, which many teachers believe improbable, there remain important areas of team-work within schools (Dolton et al 2003). Moreover, the presence of a 'collegiate ethos' (Adnett, 2003) diminishes the likelihood that teachers will 'shirk' because their effort is hard to measure, and so reduces the relevance of one common argument for tying pay to performance.

Thus if we were to stick with the conventional forms of output based pay, which as Prendergast notes, have been analysed extensively within Personnel Economics, we should expect to find few successful examples of pay for performance in schools. This was indeed the case until fairly recently. Despite a proliferation of schemes in the US in the early twentieth century (Murnane and Cohen,1986), and a long-running scheme in England in the latter part of the nineteenth century (Dolton et al., 2003), pay for performance virtually disappeared from school teaching in both countries for most of the twentieth century. Teaching in schools was barren ground for any kind of payment by results, even in private schools (Murnane and Cohen 1986). Theory and practice seemed to agree, and the affair was closed.

Nevertheless, some characteristics of teachers' work have meant that the issue never quite disappeared, and in recent years, it has undergone a revival in the US in a number of school districts with performance pay schemes, in Israel (Lavy, 1999) and in Japan[2]. It has done so most dramatically in Britain, where a national scheme, 'Performance Management', was introduced in 2000 in state primary and secondary schools in England and Wales, the subject of this paper.

The reasons for the sustained interest are easy to understand. It is widely accepted that there are considerable variations in teacher effectiveness, a point touched on in the British government's recent teacher recruitment campaign 'everyone remembers a good teacher'[3], and widely acknowledged by both classroom and head teachers in the first wave of the survey on which this article is based (Marsden, 2000). Governments have also retained an interest for budgetary reasons. Faced with a need to raise educational standards, and tight restrictions on public spending increases, several national governments have sought to use pay systems more actively as an instrument to achieve these ends. Notwithstanding the academic arguments against performance pay, many educational practitioners have observed the extent to which

existing pay rules were manipulated in order to recruit and retain, and the perverse effects of paying teachers for management activities in order to enhance their pay. It was widely felt too that the then existing salary system was failing to motivate teachers because so many (about 60%) were stuck on the top pay grade, and was encouraging them to take on additional non-teaching duties for more pay which diverted them from the classroom, and so made raising standards even harder to achieve. There was also a feeling in British government circles that even though teachers work very long hours during term time, and experience a strong professional ethos, there were few financial inducements to encourage them to accept the changes in work priorities sought by the government.

2. The teachers' performance pay and performance management system

The performance management system for state school teachers, introduced by the government in 2000, sought to address the need to reward teachers better for excellence in the classroom. Performance management (PM) sought to combine goal-setting and appraisal with performance pay, thus extending the growing practice of other parts of the British public services. It made annual salary progression dependent on performance. The new pay scale comprised two parts. For the lower part, which was, roughly speaking, the old main pay scale, the annual seniority increments were retained, covering roughly the first few years of a teacher's career. Progression to the new 'upper pay scale' required passing the 'threshold assessment', based partly on teachers' professional development, and partly on the progress of their pupils. Progression along the upper scale was based entirely on performance. There was also provision for accelerated increments for high performers along the lower part of the scale. The associated financial rewards could be considerable, potentially taking teachers to earnings to 25% above the top of the lower scale, where about 60% of teachers had been clustered in 2000. Unlike some private sector bonus systems, the teachers' performance-related increments are permanent and count for their pensions. In exchange for the new structure of rewards, all teachers were required to have an annual performance review to set goals and appraise performance, including those on the lower part of the new pay scale.

The most controversial element of the new performance system has been the concept that performance should include an element of pupil progress. On the whole, teachers, and their unions, have been receptive to rewards for improved inputs, such as for improved skills. However, pupil progress relates to their outputs, and this caused widespread opposition, with the largest of the teachers' unions opposing it on the grounds that it amounted to payment-by-results. The other unions, which were more supportive of performance review, were also strongly opposed to any form of payment-by-results, and were deeply suspicious that in some schools, head teachers would implement this part of the new scheme in a mechanistic fashion. Although the Education Department provided many 'good practice' illustrations of how pupil progress could applied in a constructive fashion, there was widespread suspicion among teachers at the outset that the scheme was really about using performance pay in order to save money and restrict pay increases to those who toed the line. As will be seen, our study shows that this perception declined over time, but has nevertheless remained a significant under-current among teachers.

To assist implementation, on its website, the Education Department provided schools with numerous examples of good practice concerning how pupil progress could be integrated into performance reviews. Many of these illustrate a problem-solving approach to goal-setting and appraisal. One example, which is discussed later in this article, shows the objective setting part of the review involved a joint analysis of strategies to tackle a student learning problem, how to improve attainments of boys in a particular subject, and agreement to implement them

during the year. The next review in the cycle would then assess how successful implementation had been, and the contribution of these strategies to the school's own goals.

Despite such positive examples, many teachers, and their unions, feared that practice in schools would be rather different. It was feared that pressures on head teachers to raise their school's academic performance would lead to payment-by-exam-results. One such pressure, which we explored was that of educational 'league tables'. As a result of changes in funding arrangements and the devolution of greater management autonomy, schools now have to compete to attract pupils who bring funding. Schools which fail to do so, will experience falling numbers and income, and may eventually be closed. A crucial signal to parents in this quasi market is provided by comparative tables, league tables, displaying each school's national exam results. These are publicly available on the Education Department's website, and are frequently published in local newspapers so that parents know which schools are getting more pupils through their exams, and can benchmark them against local and national standards.

A second aspect of diversity among schools in the implementation of performance management was suggested to us in an interview with the former head of Cambridge Educational Associates,[4] the organisation responsible for monitoring implementation of the threshold. From early on, it seemed that some schools had approached performance management as a means of improving how schools are run, to achieve better coordination between teachers' activity in the classroom and the school's wider objectives. In contrast, initially at least, the majority of schools were using the new scheme as a means of getting what was felt to be a long overdue pay increase for teachers, and which should ease staff retention problems, especially in high living cost areas such as London. Later on, we characterise these two strategies as 'reformer' and 'firefighter'. This diversity of strategies will make it possible later on to test the effects of the scheme on pupil performance outcomes.

3. The analytical approach: performance management as 'integrative' negotiation

The examples of good practice performance reviews provided by the Education Department include a special feature that is under-developed in the discussions of agency, expectancy, and goal-setting theory: namely a view of goal setting as a problem-solving process. That problem is how to align individual employees' work goals with the changing goals of their organisation. In professional work, management is dependent on the knowledge and expertise of their staff in order to define appropriate performance goals, and especially, to identify the steps necessary for their achievement. There needs therefore to be an exchange of information both about objectives, to ensure these are realistic, and about the means to reach them. The nature of this asymmetry is illustrated from a study by the government's school inspectorate, which quoted one teacher from a school with a good appraisal system which included an element of classroom observation:

> 'My classroom observation (by the head) was useless. For one thing he only came once, and there was no proper feedback. The head was completely out of touch with recent developments in modern language teaching, and so unable to engage in the type of debate I hoped for' (Ofsted, 1996 §15).

The appraiser in this case lacked knowledge of both the subject and its teaching methods, and would be hard put to 'cascade' objectives top down, and hope that they would be successfully implemented. There may also be disagreements about the goals that constitute performance.

To what extent should the teacher prioritise exam passes versus developing an understanding of, and an affection for, the language being taught, and there might need to be compromise from both sides in order to sustain commitment to agreed goals.

One framework for thinking about such processes is provided by what Walton and McKersie (1965) describe as 'integrative' bargaining, or negotiation. However, in this case, it would take place at an individual rather than a collective level, between individual teachers and their line managers. According to these authors, we should distinguish 'integrative' from 'distributive' bargaining, the latter being about shares of the pie, and the former about problem-solving in order to achieve a larger pie. They present four stages or components of integrative bargaining: identifying the problem; searching for alternative solutions; selecting the best alternative; and commitment to implementation. Whereas the first two may seem relatively technical, the third, selection, involves also reference to the preferences of the two parties, or as the two authors stress, to their utility functions. The final component brings us back to issues of re-contracting and commitment to deliver by both parties. Thus, if performance management is to be seen as involving a significant element of integrative bargaining, then one would expect it to show evidence of these components, which will be explored in the empirical part of the paper. However, before that, it is helpful to compare the integrative bargaining approach with other theoretical approaches to the analysis of incentives and performance appraisal.

Several elements of the process of integrative bargaining are recognised individually by the other main theories in the area, but they are not treated together. In discussing the optimal design of incentives, agency theory deals extensively with issues of monitoring performance, and gaining agreement to a mutually satisfactory design of incentives, otherwise the job offer will be rejected. Mostly, the emphasis has been on new hires rather than on negotiation with incumbent employees (Prendergast 1999, Tzioumis 2005). Agency theory has also looked at issues of renegotiation, particularly in relation to pay when firms are faced with changes in market conditions, and it has dealt with the problems of 'hold-ups' in such relationships, whereby one party threatens to end the relationship in order to force the other to make large concessions (Gibbons 1998, Malcomson, 1997, Teulings and Hartog, 1998). However, their emphasis has been very much upon distributive rather than integrative bargaining, on changing rewards rather than adapting elements of performance.

The psychological theory of goal setting, as recently reviewed by Locke and Latham (2002), has recognised that participative goal-setting, with an input from employees, often leads to better results, although the emphasis, as Locke and Latham (2002) observe, has been primarily on information exchange, and to a lesser extent on goal commitment. Expectancy theory emphasises the social exchange between managers and staff, and the need for perceived good faith from management in the operation of performance evaluations on which performance pay depends, but on the whole, management are left to determine the nature of the nature of performance and its link with rewards (Furnham, 1997). A third strand of psychological theories does consider problems of contracting and breach of perceived agreement, namely, 'psychological contract' theory (Rousseau, 1995). For sound methodological reasons, Rousseau rejects the idea that organisations can be party to psychological contracts: organisations are not psychological entities.

An integrative negotiation approach draws on elements of these theories by offering a stronger focus on adapting the content and priorities of work performance to changing needs

of the principal, in the light of the expertise and the preferences of the agent, and on the need to advance by mutual consent on the basis of give and take by both sides.

The next section of the paper presents the empirical results. The panel results document the change from initial hostility to performance management among classroom teachers, and also many head teachers, towards declining scepticism about its value among teachers and an increasing belief in its usefulness among school heads. It then looks at performance management and head teacher views on its contribution towards improved school management, and argues, on the basis of survey replies, that it functions in many schools as form of integrative negotiation between school management and classroom teachers. The article then seeks to provide rough estimates of the proportion of schools in the sample which could be said to practice integrative negotiation systematically in performance management, and to show that in these schools, pupil attainments in national tests have increased more than in other schools.

4. Results

4.1   The nature of the survey

The primary data source for this study is a panel questionnaire survey of classroom and head teachers in the same schools conducted at intervals between 2000 and 2004 by the Centre for Economic Performance, and based on a random sample of state schools in England and Wales[5]. It has been carried out in close consultation with the teachers' unions and professional organisations and the Education Department. Nevertheless, it is an independent study. The panel has now completed three waves: the first in February-March 2000, before the new scheme was implemented (see Marsden, 2000); the second in May-June 2001, after the first round of 'threshold' results were known; and the third in May-June 2004, after the results of the fourth round of the system, including potential progression to point 3 on the new upper pay scale. For classroom teachers, the questionnaire probes their attitudes and experiences in relation to performance management, and seeks to measure aspects of their work patterns and priorities alongside other variables such as their degree of organisational commitment and their assessment of the working atmosphere in their schools. A copy of the questionnaire used in the first wave can be found in Marsden (2000). For head teachers, it asks also about the operation of performance management in their schools, and whether they believe it has assisted them in their management duties. In addition to the 'before and after' element of the panel, it is possible to link replies from classroom teachers with those of their head teachers, and with other information on their schools concerning the impact of performance management on work patterns, and some educational outcomes based on Education Department's school performance data. Initially, the panel included replies from about 4,000 teachers and about 1,000 heads. Accounting for sample attrition, it is possible to link replies from about 1,000 teachers and about 300 heads over time through the panel. We conducted a number of checks to see whether the panel results reported here differ statistically significantly from the simple cross-section results for each wave, and found that on the whole they do not. In combining all these different types of information, this study goes much further than previous UK public service studies, such as those reviewed in the government's Makinson Report (2000), by tracking the same individuals over time, and by combining multiple points of observation and types of data. These studies, which led Makinson to conclude that the schemes practised in the British public services were not working, gave no indication as to how employee attitudes changed over time, and lacked independent data on performance outcomes, weaknesses the present study has been designed to overcome.

4.2 From initial hostility to increasing acceptance of performance management: 2000-2004.

As one would expect from the earlier discussion, at the start, teachers were more sceptical of the principle of linking pay to performance and its feasibility in their area of work than other public service employees (see Marsden and French 1998). This is reflected in the first wave responses of both classroom and head teachers in 2000 (see Table 1 below). Initially only a fifth of classroom teachers and a third of heads agreed with the principle of linking teachers' pay to performance, with comparably low percentages of both groups thinking it could lead to a fairer allocation of pay, or that it was fair to link pay to pupil progress. Yet, over time, there have been significant increases in support for these views, roughly doubling over the duration of the panel. It should be emphasised that these are balanced panel results, tracking individuals who replied to all three waves, and so represent changes of opinion by individual teachers. By 2004, between half and two-thirds of heads, and between one and two fifths of classroom teachers had come to accept these principles.

There have also been equally significant changes in teachers' beliefs about the appropriateness of performance management to teachers' work. Initially, 90% of classroom and 80% of head teachers considered that PM was inappropriate because one could not relate the work done in schools to the performance of individual teachers, a point echoed by the economist critics of the scheme (eg Richardson, 1999, Dolton et al 2003). By 2004, this had dropped to 75% among classroom teachers, and to only 44% among school heads. Likewise, at the outset over a third of heads thought teachers had too little autonomy in their jobs to be able to vary their performance, but this had fallen to under 10% by 2004. Among classroom teachers, fears that managers would use PM to reward their favourites, a deep rooted problem in other British public sector performance pay schemes, had fallen away from over half in 2000 to less than a fifth by 2004. Thus, even though many teachers maintained their opposition to PM, substantial numbers had changed their assessment of it by 2004.

Closely related to these changes in teachers' attitudes appears to be the growing perception that goal setting has been working better than initially expected, as 60% of classroom teachers and 80% of heads report that management now sets targets more clearly, and among secondary schools in particular, 40% of classroom teachers and 70% of heads say that PM is now used as a means to make staff better informed about objectives within the school. By 2004, nearly 40% of teachers reported that PM had made them personally more aware of their school's objectives, the increase being particularly strong in secondary schools. Another significant change has been the increased perception that PM provides organisational support to teachers, helping to identify their professional needs, up from 25% to over 40% between 2001 and 2004 among class teachers, and up to over 60% among head teachers by 2004. Among head teachers, there has also been modest growth to 45% in 2004 of those who believe that PM has encouraged teachers to focus on pupil attainments.

Nevertheless, the salience of pay has remained strong, and it lends some support to the position of the largest teachers' union, the National Union of Teachers, that PM is primarily about paying teachers for results, especially in the sense that it represents what its members believe to be the underlying reality of the scheme. In the first wave, two thirds of classroom teachers thought the scheme was 'simply a device to avoid giving a pay rise to all teachers', and even after four years of operation, about half of them still believed the scheme was basically about getting more work done. Despite the subsequent evidence of high pass rates, a very high percentage of teachers, and a substantial number of heads, doubt the government's commitment to continued funding of performance increases, and fear that they will become

very selective if constrained by school budgets. Initially, and again in 2004, around 80% of classroom teachers believed school budgets would impose a quota on performance pay increases, and even after four years of operation, just under half of all head teachers believed the same. Thus although the unions have pressed hard to ensure that an absolute standard of performance is applied, most teachers believe that budgetary considerations force PM to focus on relative performance, and restrict rewards to the best performers.

Apart from who gets incentive pay, there is also the question of how far teachers value the size of rewards offered. Although there seems to be a stable group of about one third who believe the new salary levels are too small to make them want to work harder, there has been a growing minority who disagree, and find the rewards attractive: up from 15% in 2000 to nearly 30% in 2004. Thus although other surveys have shown that teachers are not strongly motivated by financial incentives, pay being more a source of discontent than of positive motivation (Vaarlem at al 1992), there is clearly a group of teachers within the sample who have found the new pay scales attractive. An important category among these appears to be new entrant teachers who value the long term prospect of earnings on the extended pay scale (Marsden 2000). Finally, a key question for the interpretation of PM in schools is how far teachers believe it is operated primarily as a means to ensure teachers get their pay increase. This perception was much stronger among classroom than among head teachers, with around four fifths of classroom teachers holding this view in 2004, but only half of head teachers doing so. This suggests that classroom teachers are keenly aware of the link between increased pay and their performance reviews. Although success rates at both the Threshold assessment and upper pay scale progression were extremely high between 2000 and 2004, at over 90%, these were known *ex post*. *Ex ante*, the results show both a strong consciousness that pay increases require success in the review process, and continuing uncertainty as to whether pass rates will, in practice, be determined by absolute criteria, comparable to a 'driving test' as one teachers' union official described it, or whether they will be constrained by a quota or budgetary restrictions. A good measure of the uncertainty in teachers' minds about the selective nature of the progression linked to performance is shown by their responses between waves to the question about whether performance awards are subject to a quota. The second wave took place in spring 2001, just after teachers had been informed of the results of the first round of Threshold assessments. There was a sharp fall, from over 80% to less than 30%, in the percentage thinking restrictions would be applied to the number of successful applications. However, that percentage bounced back to 80% in the third wave. The reason for this, suggested to us when presenting preliminary results to the teachers' unions, was that the Education Department had floated proposals shortly before the third wave that the money available would be capped so that future increases would be constrained by school budgets. On that occasion the proposals were withdrawn, but the continued uncertainty has meant that teachers believe the scheme has real teeth. Indeed, there was a long-running tension between the government, whose policy is that the scheme should be selective, and the unions, which have sought to minimise selectivity.[6]

The head teacher judgements are noteworthy for the decline in numbers who think of PM primarily as a means to get pay increases for their teachers. This was especially true in secondary schools which have more developed management systems than primary schools. This would be consistent with an increased emphasis on using PM as a means of improving goal setting within schools noted earlier on, and is consistent with the point to be developed later on, that the number of schools using PM to reform school management has been growing.

Thus, the first impression from these results is that the predicted failure of performance reviews and performance pay in schools has not occurred, and that by 2004, there was every sign that it was taking root in schools, providing more motivating rewards for a significant number of teachers. Most important, the procedures for defining the kinds of performance that management wanted to achieve were proving moderately effective: goal setting was believed to have improved, teachers felt management was providing some support to them as a result of PM, and there was an increased awareness of the priority to be given to pupil attainments.

Table 1. Classroom teachers' judgements of Performance Management: before and after implementation (Balanced panel results)

Abbreviated questions	Class teachers				Head teachers			
	Wave 1	Wave2	Wave3	Change	Wave 1	Wave2	Wave3	Change
	% agree	% agree	% agree		% agree	% agree	% agree	
Acceptance of the basic principles of PM								
The principle of relating teachers' pay to performance is a good one.	23	29	37	***	34	37	50	*
PM will lead to a fairer allocation of pay	6	13	19	***	28	45	63	+
Fair to reward for pupil progress	22	22	37	***	25	45	57	**
Appropriateness of PM to teachers' work								
Hard to relate the work done in schools to individual performance	89	83	75	***	83	69	44	***
Teachers have too little autonomy					36	30	9	***
Managers will reward favourites	54	43	19	***	-	-	-	
PM causes jealousies	88	60	37	***	81	50	29	***
Improved goal setting by PM								
Targets set more clearly	-	42	60	***	52	84	82	***
Made **me** more aware of my school's targets	-	32	37		-	-	-	-
(Secondary schools only)	-	22	35	***	-	-	-	-
More incentive to focus on pupil attainments	-	-	-	-	40	38	45	Ns
Used as a means to make staff better informed about objectives within the school	-	16	31	***	Na	33	41	Ns
(Secondary schools only)	-	15	37	***	-	44	70	***
Organisational support through PM								
Used to help better identify teachers' professional development needs.	-	25	43	***	-	54	63	Ns
(Secondary schools only)	-	-	-		-	61	74	Ns
Incentives offered by PM								
Salary levels > Threshold are too low to make me want to work harder (% agree)	33	35	33	***	-	-	-	-
" " " (% disagree)	15	25	28	***	-	-	-	-
PM simply a device to get more work done	58	58	49	**	-	-	-	
(Secondary schools only)	66	65	56	***	-	-	-	-
There is a budgetary quota on Threshold and UPS pay increases	82	28	79	***	-	-	-	

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PM helped to ensure teachers in your school get their pay increase	-	81	76	Ns	-	72	55	ns
(Secondary schools only)	-	79	82	Ns	-	64	46	***

Change over time significant at: *** <1%; ** <2%; * <5%; + <10%. Ns: not statistically significant
Number of balanced panel observations: class teachers: c 2300; head teachers: c 100 for most questions.
Note: Results are based on the balanced panel, that is those replying in each of the three waves. The results of the balanced panel mostly differ only slightly from those of the three cross-sections. Scores in the table are weighted by sample fractions (*smplwt*).

4.3   Performance review in schools as 'integrative negotiation'

Clues as to the reasons for the moderate success of PM by 2004 can be found by looking more closely at the process of performance review that lies at the heart of PM. This section explores evidence that, in the best cases, performance reviews have functioned as a form of integrative negotiation of teachers' work objectives, and notably in the 'reformer' schools. It does so by considering in turn each of the four stages of integrative bargaining identified by Walton and McKersie.

a)   Identifying the problem

In the first stage of integrative negotiation, the two parties have to identify the problem which brings together the priorities of the organisation and the capacities and orientations of its members. In the case of performance review, this means relating the contribution of individual teachers to the wider objectives of the school and their adaptation to new circumstances.

From the management side, in recent years, schools have come under a large number of external pressures which have made their comparative performance with other schools a key concern. This information is easily available to parents of potential pupils, and with the funding changes that attach school funding to pupils, schools compete in a 'quasi market' (Glennerster, 2002). The Education Department also benchmarks school performance, and there is also richer and more qualitative information available to all online from government inspectors (Ofsted). Within schools, this pressure has become symbolised by the educational league tables of local schools based on comparative academic performance at national tests. To capture this element of pressure on head teachers, we enquired about the influence of league tables on their schools in the third wave. In that, 60% of heads reported increased parental pressure as a result of educational league tables. We also enquired about the methods used to produce better academic performance in their schools, and notably, whether schools sought to learn about educational practices used at comparable schools scoring strongly in school league tables. Fifty percent of teachers, and sixty percent of heads, replied that their schools did so. Heads were also asked whether they had shifted resources in response to league table performance issues: 60% reported greater academic content in courses covered by tests; 41% that significant resources were devoted to teaching test skills; and 30% reported more resources being provided to test subjects, such as maths, at the expense of other subjects. Thus the mixture of benchmarking and quasi market had generated pressure on heads to change priorities and shift resources in their schools. Most schools use a range of decision-making methods to address such issues, but the performance review has a special place because it provides an opportunity for individual-level discussions about individual work objectives and how to relate them to school objectives.

The results of our survey indicate that classroom teachers enter this process with different priorities, which have also been taken up by their unions. For example, when questioned

about the reasons for the way they allocated their discretionary working time between different activities, many teachers emphasised their desire to give a 'high quality of education' as the most important reason, particularly for such activities as lesson preparation and feedback. It can also be found in some of the written-in comments. As one classroom teacher put it: the new system is based on a 'narrow perception of education as measured by attainment, whereas schools are also about learning to be members of a community'[7]. Indeed, some heads expressed similar views in their own written-in comments, but it was their job to make the new system work. Thus performance management can be seen as involving a process of problem identification from two sides, which are not necessarily in opposition to one another, but they do have distinct points of view which will need to be reconciled.

The effectiveness of this process is revealed by the growth in the share of both head teachers and team leaders[8] who believed that PM had made teachers more aware of school objectives, both around 60% by wave 3, and had make teachers think more systematically about their work priorities, both around 50% by wave 3 (Table 2). Many also thought that it had increased the importance of good middle-management in their schools. Given the difficulty for head teachers to be acquainted with the detail of their colleagues' work except in small schools, and their inevitable reliance on this intermediate management level, this suggests that in many cases PM has raised awareness of the need to strengthen the linkage between different levels of management within schools.

Table 2. Contribution of performance management to improved goal setting in schools: Head teachers' and team-leaders' views (balanced panel)

Performance management has:	Wave	Head Teachers Agree %	Team leaders Agree %
made more teachers aware of the school's objectives in the School Improvement Plan	2	41	47
	3	57**	65*
made teachers think more systematically about their work priorities	2	39	37
	3	54*	50*
increased the importance of good middle management.	2	55	45
	3	60	42

Note: sample numbers in the balanced panel are 104, and in the cross section about 420 and 290 respectively in waves 2 and 3. Changes between waves are statistically significant (Chi2 prob <=1%) for questions 1 and 4, significant at the 5% level for priorities, and not significant for middle management. Similar differences between the waves are shown in the comparison of cross-section data, but significance levels are higher, except for middle management owing to the larger number of observations.
Statistical significance of change between Waves 2 and 3: ** 1%; * 5%. Results weighted by sample fractions.

b)   Searching for alternative solutions
The second stage of integrative negotiation involves identifying strategies for solution, and how to implement them, including support given to teachers by their schools. The survey did not probe directly the search for alternative solutions, but when considered with other sources, there is indirect evidence that this occurs in the best cases. A first source is the good practice case study material provided by the Education Department at the outset, which drew on

existing practice in some schools, and sought to show others how PM could be used (see Box 1 below). The spirit of these is to suggest open enquiry in the search for solutions rather than a strict top-down approach. The Education Department's guidance stated:

> 'Objectives would typically emerge from a discussion between team leaders and individual teachers about the priorities for the coming year and the particular ways in which the teacher can help the pupils he or she teaches. This might involve targeting the progress of a group of pupils which is not meeting expectations or a small number of named pupils. Or it might be a priority to implement new policies or develop approaches or techniques which will help pupils to progress e.g. better classroom management skills.' DfEE (1999, p.10)

Thus, having identified a problem, the two parties work together to devise a strategy to tackle it. The same spirit was illustrated in a number of case studies included in the same document, and which fleshed out these general principles.

Box 1: Objective Relating to Pupil Performance: Class Teacher (Year 5)

Background: Evaluation of optional Year 4 test data and the Year 4 teacher's own assessments shows a clear gender gap in attainment in English and a weakness across the class in writing. In the judgement of the Year 4 teacher, by the end of the year about 60% of children in the class were not able to do all that the Literacy Framework expects. In his view about 70% of boys fell into this category as opposed to 50% of girls.
The objective: by the end of Year 5, to increase substantially the percentage of the class as a whole that will be able to do almost all of what the Literacy Framework states that they should be taught over the year, in writing as well as reading, and to reduce the gender gap from the present 20%.
In discussion: the teacher and team leader might discuss the importance of remedying identified weaknesses in children's knowledge of spelling conventions, sentence construction and punctuation, and teaching strategies known to be helpful for boys such as clear short term targets or use of non-fiction writing exercises. The review meeting would discuss the outcomes achieved by the children and review comparative achievement by boys and girls.

Source: DfEE (1999).

Other examples provided by the Education Department include the provision of support to teachers to enable the objectives to be achieved, most notably, further professional development to provide additional skills where needed, but they also included other types of support, as identified in the objective setting process.

An important part of the search for alternative solutions involves consideration of the means required for their implementation. Management controls many of these resources, so it is to the head teachers' replies that one has to turn for evidence of this (Table 3). The questions that comprise the table reflect the factors identified by heads in the first wave as potential causes of variations in the effectiveness of experienced teachers in their schools, and therefore which are likely to be addressed in the development of new strategies for the school. Thus, we asked heads whether PM had enabled them to address some of these problem factors. By wave 3, benefits were identified in a substantial minority of cases, between 20 and 35%, the most important being assistance in identifying teachers' professional development needs, and workload problems. There was a notable increase between the second and third waves for

some issues. By 2004, 35% of heads in the balanced panel reported that PM had helped them identify and assist teachers whose workload problems might inhibit their performance.

Table 3. Performance management as a means of supporting teachers:
Head teacher views, balanced panel.

PM has helped the school assist those teachers:	Wave 2	Wave 3
	% agree	% agree
- with difficult or inappropriate workloads.	11	35**
- whose professional development needs are greatest	37	36
- whose morale was low	18	23
- who had difficulty motivating their pupils.	12	21*

Change between Wave 2 and Wave 3: statistical significance: ** 1%; * 10% level
Weighted by sample fractions. Number of observations: balanced panel 103, and in the cross section, wave 2 c. 415, and wave 3, c. 290.

c)   Selecting the best alternative:

An important part of integrative negotiation lies in involvement of both parties in selecting the best alternative: otherwise it is hardly a negotiation. Teachers were asked about the conduct of their own performance reviews. A first test is whether teachers themselves thought the agreed priorities reflected the wider objectives of their schools, as in certain key management documents, such as the School Development Plan (SDP) (Table 4). They might for example have disagreed with the question because they thought the head had imposed some personal objectives unrelated to those of the school, or because the teachers were ignorant of the school's objectives. In either case, one would conclude that that the resulting solution was not seen by both parties as the 'best alternative'. Although some of the written-in comments by teachers mentioned objectives being imposed on them in their performance reviews, the answers to other questions in Table 4 also confirm that around 90% of teachers felt fully involved in the process: they had the opportunity to discuss objectives, to influence those chosen, and account was taken of their professional needs. Confirming the 'golden thread' that the government established in the scheme, in the great majority of cases, the performance reviews included indicators of pupil progress. On this evidence at least, it would seem that teachers were involved in the selection of the best alternative strategies to achieve their objectives, and thus participated in the third stage of integrative negotiation.

Table 4. Teachers' reports on the nature of their most recent performance review.
(balanced panel)

	Wave 2	Wave 3
Reference of individual goals to school goals	% agree	% agree
Did they relate to the wider objectives of the school (as in SDP or team plans)?	91	89
Did they include indicators of pupil progress?	Na	81
Teacher influence on goal setting		
Did you have the opportunity to discuss them with your team leader?	96	91+
Could you influence the objectives chosen?	92	89
Did they take account of your professional needs?	79	78
Evidence of commitment to agreed goals		
Were your objectives clear and measurable?	94	88+
Do you understand how they will be monitored and reviewed?	81	87
Are you in a position to achieve your objectives?	93	87*
Did you agree your objectives with your team leader?	97	Na

Significance of change wave 2 to wave 3: * 5%; + 10%. Not every question was asked in both waves to minimise the demands placed on respondents.

d)   Commitment to implementation:

The final stage of any integrative negotiation concerns commitment to implementation. A necessary part of this is that objectives should be clear and measurable, that there should be verifiable criteria of fulfilment, and an understanding of the monitoring procedures. Without these, the process could easily become an empty exercise. The overwhelming majority of teachers (c. 90%) reported that they had clear and measurable objectives, and a slightly smaller percentage said that they understood how progress would be monitored and reviewed, and that they were in a position to achieve their objectives (Table 4). They also considered their objectives were realistic, and nearly all said they had agreed them. As with choosing objectives, so with monitoring, the Education Department gave considerable guidance as to how statistical and other evidence could be used to help define and monitor achievement of objectives.

Considering these replies at face value, there is a strong case for concluding that integrative negotiation is an important component of performance management as it is practiced in many schools. Inspection of the written-in comments underlines this, but it also raises some questions about the significance of the very high level of positive reports. On the positive side, one head teacher wrote: 'It has helped in the move towards being a self evaluating school and to establish the need for more challenging objectives for staff. The previous system was "cosy"', (#30033). In similar vein, another head said: '[PM] has made them more aware of the need for objective evidence to prove pupil progress' (#30113). On the negative side, some classroom teachers expressed adverse comments, of which one wrote: 'PM has resulted in teachers doing more admin, tasks analysis, statistical work and less time given to creating interesting vibrant lessons', (#20888).

One explanation of such divergent written-in views, apart from their relatively small number compared with the main replies, is that head teachers had a somewhat different perception of performance management than their classroom teachers. For the former, PM involved use of

data and other materials to diagnose problems faced by their schools. For the latter, in schools where the message had not been well communicated, statistical data were irrelevant to the task of 'creating interesting vibrant lessons'. One measure of whether PM was mere form-filling and agreeing a paper exercise lies in the extent to which both head and classroom teachers share the view that PM has led to improved goal setting in their schools. Where classroom teachers experience PM as a lot of meaningless statistics they are unlikely to have been involved in the problem-solving dimension of goal-setting. To this we now turn.

5. Instrumentality of PM in linking classroom teacher and school-wide objectives

Integrative negotiation requires two parties, and so it is important to demonstrate that the schools in which this was best developed were also those in which teachers had greater awareness of school objectives. This requires a linking of replies from classroom and head teacher. Ideally, we should compute average scores for teacher awareness of objectives in a particular school, and then compare these with the judgements of the head teacher on the quality of the different stages of integrative negotiation within the performance review process. Unfortunately, the response rate across schools was too variable, and so we tackle the question the other way round: whether the teachers who said PM had made them personally more aware of their school's objectives were working in schools in which the heads reported that PM was effective? Although there appears to have been a considerable improvement in the operation of PM between waves 2 and 3, we limit this analysis to wave 2 because it contained a wider range of descriptive questions to head teachers about the conduct of performance reviews.

To gauge the quality of performance reviews as judged by the head teachers, we conducted a factor analysis which boiled eighteen questions down to three dimensions: whether PM had led to clearer goals being set; whether objectives were agreed to by teachers in their schools; and whether the school provided support, such as for professional development. These three indexes were then included in an ordered probit regression on classroom teacher replies as to whether their performance review had raised their awareness of school objectives. The latter variable included a five point scale from disagree strongly to agree strongly. We also included some descriptive questions from the teacher questionnaire relating to aspects of their performance reviews, plus a set of control variables. The results are shown in Table 5. Although the pseudo r-squared is low, it is statistically significant at the 0.1% level. The important conclusion from the table is that when head teachers judge performance management to provide clearer goals and, that those goals are agreed, classroom teachers are more likely to report that it has increased their awareness of their school's objectives. Likewise, classroom teachers are more likely to find PM increases their goal awareness when the performance review is carried out systematically, when there are specific and clear goals, their own needs are taken into consideration, and when they see their school using PM to inform and to support its teachers.

Table 5. Factors raising the awareness of class teachers of their school's objectives
Dependent variable: 'PM has made me more aware of the targets set in the school development plan.'
(Ordered probit, values from 1, disagree strongly to 5, agree strongly.)

	Coef.	Sign-ific-ance	Std. Err.	Variable type
Head teacher policies on PM in their school				
Clearer goals	.1346927	**	.0547	Factor score
Objectives agreed	.1482757	***	.0388	Factor score
Provision of support	.0278599		.0489	Factor score
Teacher views of their latest Performance Review				
Specific objectives set in PR	-.3596218	***	.1379	Dummy
Clear objectives set in PR	.1137584		.1214	Dummy
Objectives related to SDP	.3119143	***	.0941	Dummy
Objectives take account of professional needs	.1723101	*	.0829	Dummy
School provides a mentor for applications	.1068846		.0764	Dummy
Teacher eligible for Threshold	-.2677386	**	.1178	Dummy
School uses PM to inform about objectives	.4737709	***	.1286	Dummy
School used PM to assist profession dev	.3853758	***	.0998	Dummy

Significance: *** <1%, ** 2%, * 5%. Robust standard errors used.
Control variables on teacher and school characteristics included dummies if female, aged over 30, part-time, had a degee, union member, secondary school, and number of school pupils. Of these, only 'secondary school' was significant, at 0.1%, with a coefficient of -0.3.
Pseudo R2=0.045, prob = 0.000 Wald chi2=158.7, n=1699. Data analysed using STATA 9. Factor analysis of head teacher views was based on an analysis of 18 variables on different aspects of PM in their schools. These scores have a mean of zero and a standard deviation of unity. The variables were adjusted by setting missing values to neutral values to ensure the regression was based on full coverage of the response for wave 2. Total teacher response in wave 2: 1792, used replies in regression: 1699.

A slightly different angle on the same question is provided by examining the degree to which head teachers, the school leadership group and classroom teachers all share the view that PM has caused goal setting to become clearer and more effective in their schools. Again the motivation for this analysis is that a consistent set of views is much more likely if goal setting is being run systematically in a school, and in a spirit of integrative negotiation. If the spirit is all 'take', or that goals are imposed on teachers, or just that heads have unrealistic views about how the process is running in practice in their schools, then one would expect no relationship between head, leadership group and classroom teacher views. In the absence of a coordinated approach, individual teachers may have good or bad experiences with their individual department heads, but these would not be consistent within the same school. On the other hand, if there is coordination, one would expect the views of these three groups to converge.

We approach this issue by combining a number of questions to head teachers on the contribution of PM in their schools to more effective goal setting, and computing an index based on a factor analysis, and then tabulating these against classroom teacher judgements about goal setting. This provides an indication of the degree to which the two sets of judgements coincide (Table 5, Panel A). Being a factor score, the mean is zero and the standard deviation is unity, so that roughly two thirds of cases should lie in the range between plus and minus one. Thus, a positive score for school 'x' indicates that the strength of the head's assessment of goal setting is above the average for schools in the sample. Thus in Panel A, we observe that in schools where classroom teachers agree strongly that PM has

improved goal setting, the heads' scores are also above average and in the positive direction (at 0.439), indicating a convergence of their views. Conversely, in the schools where the teachers judge PM has not improved their awareness of school goals, we observe lower scores for the head teacher assessments. Thus, as with the ordered probit analysis, we find evidence that, where heads report PM as working effectively, so too do classroom teachers.

Table 5. Comparing the effectiveness of PM as seen by head teachers and classroom teachers in the same school.

Index of effective goal setting as judged by head teachers.

Panel A: Index related to class teacher views of effects of PM (all classroom teachers including those in the leadership group):

	PM has made **me** more aware of school targets	PM has given me incentive to work beyond job requirements	PM means good work now rewarded	PM makes managers set clearer targets
Agree strongly	.439	.268	.202	.194
Agree	.100	.160	.133	.108
Disagree	.046	.101	.107	.040
Disagree strongly	-.075	.104	.057	-.001
Neutral/no view	.214	.118	.088	.143

Panel B: Index related to the leadership group views on the effects of PM on classroom teacher performance.

Leadership group response (excl head):	PM makes class teachers more aware of school targets	PM promotes better work priorities among class teachers	PM increases importance of good middle-mgt in the school
Agree strongly	.402	.300	.181
Agree	.111	.202	.188
Disagree	.105	.127	.095
Disagree strongly	-.359	-.302	-.217
Neutral/no view	.210	.054	.131

Factor scores for better goal setting as judged by head teachers. Cells show factor scores for head teacher replies in these schools, waves 2 and 3 combined. Mean zero, standard deviation of unity.

We are able to take this a step further by examining how far both head teachers and the leadership group (departmental heads and team leaders) coincide in their assessments of the effect of PM on goal setting for classroom teachers (Table 5 Panel B). This is more a measure of consistency of view within the managerial hierarchy in schools. One would expect to find such consistency in schools in which integrative negotiation is a part of PM, which is shown by the rising value of the head teachers' index as we move towards schools where the leadership group has a positive assessment of PM.

Finally, we turn to the relationship between heads' judgements of the effectiveness of goal setting and class teachers' reports concerning the content and conduct of PM in the same schools. As already mentioned, pupil progress has been the litmus test for the government as

to whether or not 'performance' is real. As can be seen in Table 6, in schools where head teachers judge PM to be effective, classroom teachers are more likely to report a continued emphasis on pupil progress within PM. Secondly, echoing the element of organisational support to teachers where PM has been well-implemented, teachers are more likely to be confident that merit will be rewarded – 'all good teachers' can expect to progress on the upper pay scale. Finally, reflecting the external pressures on school management, it is notable that where head teachers report effective goal setting, class teachers report that their school actively benchmarks its educational practices on other good-performing schools.

Table 6. Class teacher views of changes to PM

Class teacher responses (all classroom teachers)	Yes	No	Neutral /no view
Now less focus on pupil progress in PM	.0484	.1819	.0623
All good teachers can now reach point 3 on UPS	.1205	.089	.095
School looks to education practices of schools higher up league tables	.1259	.0360	.1505

Cells: head teacher scores of whether PM aids goal setting in their school. All class teachers combined.

6. How many schools have adopted the 'reformer' strategy?

By now it is clear that behind the general picture of growing acceptance and increasing positive assessment of PM shown in Table 1, there is considerable diversity in the way in which the national scheme has been implemented in individual schools. Thus there would seem to be schools where it is quite reasonable to accept the PM has functioned like a process of integrative individual-level negotiation, whereas in others, this seems to be far from the case. This diversity was reflected in some of the written-in comments. One teacher wrote: 'Teachers feel obliged and pressurised into making unrealistic targets at the beginning of the year which they then cannot fulfil during the year' ('#833 T-W2). On the other hand, one head wrote in: 'PM has improved the positive attitude to professional development and self-improvement within the overall picture of school improvement' (#60162 H-W2).

There will clearly be a large grey area of PM practice in between the cases of imposed goals and those where there is a real spirit of negotiation. Therefore, a precise allocation of schools into one or other category is impossible and any measure has to be taken with a grain of salt. As schools change over time, so the manner in which they apply PM may also evolve. Therefore it is better to talk of strategies adopted by schools, and which may change, rather than to seek to characterise individual schools. Thus, a first strategy, hinted at earlier on is the 'reformer' strategy, where the school seeks to use PM as an opportunity to improve management and to use goal setting to improve coordination within the school. On the other hand, the 'fire-fighter' strategy groups two broad approaches: to use PM to get teachers their pay rise, and so reduce staff recruitment and retention problems; and to use PM to impose targets on teachers in an attempt to raise performance. Both of these are likely to be driven by crises. A school may well switch strategies, from being a 'fire-fighter' to being a reformer, for example, once retention problems have been resolved, and there is time to move on to other issues.

Table 7. Percentage of schools with 'joined-up' goal setting:
Schools in which class teachers respond 'agree' given that both head teachers and the leadership group agree that PM has improved goal setting in their schools

	PM has led to improved goal setting in my school			
	(a)	(b)	(c)	(d)
	% agree	% agree	% agree	% agree
	Cross section analysis pooled across waves			
Waves 2 & 3 using pooled responses	**28.7**	**26.5**	**26.0**	**15.6**
Schools with a complete set of observations	*397*	*219*	*273*	*224*
	Panel analysis using wave-specific responses			
Wave 2	**20.4%**	**27.2**	**14.3**	**8.2**
Wave 3	**35.8%**	**38.5**	**26.8**	**20.3**
No complete obs. wave 2	*206*	*81*	*70*	*85*
No complete sets of obs wave 3	*137*	*65*	*82*	*74*

Notes: column headings:
  (a) heads and all classroom teachers
  (b) heads and leadership group
  (c) leadership group and non-leader class teachers
  (d) heads, leaders and non-leader class teachers
The heads' judgements on goal setting were based on the same index as that used in Tables 5 and 6, but taking the median value as dividing positive from negative judgements as to whether PM had improved goal setting. The leadership group values relate to those who agreed that PM had improved goal setting in their schools, as did the class teacher question. Members of the leadership group were identified from the biographical data obtained in the first wave. The number of observations in the panel was reduced by the need to have responses from both heads and the relevant group of classroom teachers for each school.[9]

One way to identify the 'reformer' strategy might be to enquire whether goal setting is integrated within a school, and in the spirit of the previous discussion, to explore whether both classroom and head teachers' agree PM has improved goal setting in their schools. We characterise schools with the 'reformer' strategy as those in which head teachers give above average scores using the index of goal setting quality in Tables 5 and 6, and where the classroom teachers agree it has improved goal setting. On these rough and ready estimates, we may characterise between 15% and 25% of schools in the sample as pursuing the 'reformer' strategy (Table 7). This can be seen in the top row, which uses the largest number of observations available by pooling responses for 2001 and 2004. A similar analysis was carried out for the other indicator used in the earlier tables, namely, whether PM had increased one's personal awareness of school targets. The effects were somewhat smaller, but so too was the number of positive replies to that question. These estimates are consistent with those of early case studies by Wragg et al (2001), and by Mahoney et al. (2003), who found modest effects of the new system in changing how teachers perform. However, what these early studies could not capture is the growth in the number of schools adopting the 'reformer' strategy. Even though the small numbers of effective observations beckons caution, whichever measure is used, there has been an increase of about ten percentage points in such schools: from 10-

20% in 2001 to 20-30% in 2004. The growth in the numbers of 'reformer' schools was confirmed by computing a transition matrix between such schools in 2001 and 2004, which showed strong movement from 'fire-fighter' schools in 2001 into the 'reformer' category in 2004, with only small number of moves in the opposite direction. Thus, one can say that the number of schools adopting the 'reformer' strategy has increased quite strongly since the inception of the new system.

7. School performance

Finally, we turn to effects of PM on school performance as reflected in the government's league table performance indicators. It is impossible to test whether the new system has led to improved pupil results for the whole country because there are too many other factors at work. However, it is possible to examine whether the schools which implemented performance management most thoroughly achieved greater improvements in their results than those which did not. Comparing improvements in goal setting with improvements in academic performance over time across schools enables us to factor out many of the possible competing variables. It should be added that national tests are externally assessed so that although there has been debate about grade inflation across the system as a whole, the scope for any individual schools to inflate their grades is small. It is quite likely that using a relative measure understates the possible full effect of PM on school performance, but we have no simple way of adjusting for the unknown amount of general grade inflation.

To gauge these we take changes in the academic results of schools at Key Stage 2 (age 10) for primary schools, and for GCSE[10] (age 15) for secondary schools (Table 8). We identify those schools which improved their relative academic performance as reflected in the results for school years ending 1999-2000 and 2002-2003, and compare this group with those reporting an improvement in goal setting between waves 2 and 3. The sample numbers of those changing between waves 2 and 3 are quite small, so the results can be only tentative, but we found a positive and statistically significant relationship: schools whose heads report improvements in goal setting were more likely also to have improved their academic results.

Table 8. Goal setting and school performance

(Column %) Improved use of goal setting in school	Improved relative academic performance at school	
	No	Yes
No	53	40
Yes	47	60
	Chi^2	3.1
	P	0.079

Note: table shows changes between waves 2 & 3.
Note: goal-setting factor score as in Tables 5 and 6. Based on the 169 observations for schools that could be matched.

Confidence in these results is boosted by similar findings by researchers at the CMPO, Bristol University, using a completely different methodology, which show a positive effect of threshold assessment on the academic performance of pupils in classes taught by eligible teachers (Atkinson et al. 2004). The CMPO study examines the change in academic achievements of pupils in classes taught by teachers who were, or were not, eligible to pass the Threshold. They found that pupils with teachers eligible to pass the Threshold were more likely to improve their performance. Although the CMPO study emphasises the financial

incentive of passing the threshold, their evidence is consistent with this paper. Their statistical results could equally well derive from improved goal-setting as opposed to simple financial incentive. Although the findings of our own study suggest that most teachers are not strongly motivated by the extra financial rewards offered, it is clear that going through the threshold application procedures would make them more amenable to focusing on the goals agreed with their head teachers.

8. Conclusions

This paper has shown that despite initial academic scepticism and the hostility of many teachers and their unions, performance management had, by 2004, taken root in many state schools in England, and was contributing to improved goal setting. Although such schools were still in the minority by 2004, in those where PM had become well established, it had also contributed to improved pupil performance. The reason the initial academic scepticism was misplaced was that insufficient account was taken of how the problems of performance definition and monitoring could be resolved by appropriate goal-setting measures. This suggests that if we are take up Prendergast's challenge to look at performance incentives across a wider range of occupations, we need to give more consideration to mechanisms for defining and agreeing performance goals.

Although some of the leading exponents of goal setting theory have systematically downplayed the importance of financial incentives (e.g. Locke and Latham, 1990), they have assumed a key supporting role in the teachers' case. For teachers, the link with pay has been of central importance. At one level, it was the 'bribe' to gain acceptance for the new system: no performance management, no large pay increase. But there is also a sense in which it has functioned as performance related pay, and so contributed to the negotiation between school management and classroom teachers. Heads can decide who to put forward for the Threshold assessment, and they can choose when to propose their colleagues for movement along the upper pay scale. The evidence from a teacher's performance review is one of the key items in the submissions for pay progression. Up until the time of the latest wave, in practice, and ex post, success rates at the Threshold and for upper pay scale progression have been very high, and some have argued it is virtually automatic. However, this is to miss the power heads have to advance or postpone proposals for upper pay scale advancement, and the impact of the long-running uncertainty over central government funding for performance increases. Ex post the pass rates may be high, but ex ante, in the eyes of most teachers and their heads, according to the evidence of the CEP surveys, the outcome is uncertain. It is surely the ex ante prospect that drives behaviour rather than the ex post knowledge.

The link with pay introduces another element, namely that of negotiation. It has been argued in this paper that an appropriate framework for considering the effective cases of goal setting within PM is that of integrative negotiation. The rates of pay are fixed by national pay scales, and schools are constrained by Education Department rules as to how they allocate their budgets. Nevertheless, putting a teacher forward for the Threshold or for upper pay scale progression earlier rather than later is one of the measures of organisational support available to head teachers when trying to work out solutions to the kind of problems that are the focus of PM: alignment of individual and collective goals, and renegotiating work priorities. Walton and McKersie were careful to retain a reference to the parties' utility functions within their analysis of integrative bargaining. Problem-solving has perhaps always a technical component, but the chosen solution nearly always also affects the welfare of both parties. Putting a teacher forward for progression is one of the elements of support alongside

professional development, and adjustment of inappropriate workloads that can be used to help persuade individual teachers to adjust their work priorities to those needed by their schools.

Could this be achieved without the link with pay? A previous Conservative government introduced a national teacher appraisal scheme in 1991, yet it was not widely implemented in practice (Ofsted, 1996), and what was left of it was replaced in 2000. In contrast, PM has been almost universally implemented, and as shown in the CEP surveys, its design in most schools, as concerns written objectives and so on, follows the key Education Department's guidelines. Although it is difficult to probe in this survey, there are signs of important differences between the 'fire-fighter' schools which have just used PM as a form-filling exercise to get teachers their pay increase, and the 'reformer' schools. The former dissociated the two processes, and have paid the price as PM appears to have been less effective than in the 'reformer' schools, and arguably less beneficial in terms of pupil attainments.

One piece of evidence that would have helped to clinch the argument about changing priorities and practices by classroom teachers as a result of PM was lost in the course of the survey. It had been hoped to track how teachers allocated their discretionary time, this being considered a better measure than questions about changes of priorities and practices. Unfortunately for the study, measurement of this variable was disturbed by conflicts over teachers' working hours, and government action to 'remodel' teachers' working time. It also proved impossible to capture teachers' working time use at the same point in the school year while at the same time surveying attitudes at the same point in the performance management cycle. As a result, there proved to be too much 'noise' in this key variable. Nevertheless, we know from the replies of head teachers that many of them have shifted resources and teaching priorities towards more academic and test subjects in response to league table pressures, and these are more likely to include 'reformer' schools. With this, the good practice examples of performance reviews, and the evidence of improved pupil attainments in 'reformer' schools, we can infer that many teachers have adjusted their work priorities as a result of performance management where it has been well run.

By the time of the last wave in 2004, it was clear that effective performance management was spreading as a result of more schools adopting a systematic approach rather than diffusing evenly by the same amount across all schools. Hence the interest in identifying those with the 'fire-fighter' and 'reformer' strategies, and tracking those that switch. Adopting the 'reformer' strategy opens up not just a one-off change in performance for the school, but rather provides it with the means of addressing continuously changing priorities. Professional groups may bring a high degree of motivation by virtue of their professional ethos, but that can also prove conservative in the face of such changes. The cases of systematic performance management suggest that by approaching goal setting as a form of integrative negotiation, a way is opened to addressing changing school priorities on a long-term basis. Recognising this is important, because professional groups, such as teachers, bring expert knowledge to their work that is not always accessible to management. Even when the manager is another teacher, there may be differences in subject knowledge and teaching methods, so that it is hard to identify and impose top down new objectives and the strategies to achieve them. Approaching the process as one of integrative negotiation enables both parties to engage in a dialogue on their respective objectives, the means to achieve them, and the measures of organisational support needed. In such cases, agreement to goals is arguably the more appropriate means of gaining commitment to fulfil them.

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10. Endnotes

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[2] We are indebted to Shushi Okazaki of the Akahata newspaper for information about schools in Japan.

[3] The advertising slogan was used by the government's Teacher Training Agency in the early 2000s.

[4] We are indebted to Mike Chapman, former head of Cambridge Educational Associates, for first drawing our attention to the different ways in which schools were approaching the new system.. The CEA was in charge of the system of schools' external advisors for the first wave of threshold assessments.

[5] . Data for schools in Wales were not included in this analysis.

[6] . This is described in Marsden and Belfield (2005a).

[7] . Respondent #622 Classroom teacher-Wave 1.

[8] Team leaders are classroom teachers exercising middle management responsibilities.

[9]. Although we had information from 424 schools for the balanced panel analysis, this yielded only 214 in wave 2 and 139 in wave 3 with information on the head's assessment of improved goal setting. The numbers of schools with a complete set of observations dropped further when tabulating these replies against those of classroom and leadership group teacher. This will tend to eliminate smaller schools disproportionately. Results are unweighted and do not correct for over-sampling of secondary schools.

[10] General Certificate of Secondary Education.

11. Appendix 1: Sample design and questionnaire.

The questionnaire was developed in close consultation with the teachers' unions and the Department for Education and Skills, and piloted on groups of lay representatives. For the first wave, a random sample of 1,675 schools was drawn from the Register of Educational Establishments for England and a similar register for Wales, and packages of questionnaires were sent to head teachers. Heads received a covering letter explaining the nature of the study, that it had the support of the head teachers' associations, and that it had been developed in consultation with the teachers' unions and the DfEE. They were asked to distribute the questionnaires. In small schools with under 35 teachers, every teacher was sent a questionnaire, and in larger ones, heads were asked to select every nth teacher off the school's staff list depending on the size of the school. Heads were asked to complete a special questionnaire. Being a panel study, the initial respondents to wave one were approached again for waves two and three.

The overall response rate to the first wave was about 20%, which comprises a double response: whether the head teacher agreed to distribute the questionnaires in the first place, and then whether the teachers themselves chose to reply. In many schools, head teachers have a policy of not distributing questionnaires in their schools in order not to add to the workload on their teachers.

Initially, the panel included replies from about 4,000 teachers and about 1,000 heads. Accounting for sample attrition, it is possible to link replies from about 1,000 teachers and about 300 heads over time through the panel. We conducted a number of checks to see whether the panel results reported here differ statistically significantly from the simple cross-section results for each wave, and found that on the whole they do not.

The questionnaire used for classroom teachers and for head teachers in Wave 3 can be found in Marsden and Belfield (2005b). That for wave 1 can be found in Marsden (2000).