Who becomes an HoD?

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SUMMARY

This report is an output of the Department of Basic Education's Working Group on the Review of Basic Education School Funding. For many years, there has been a need to clarify the extent to which promotions into schools-based head of department (HoD) positions occur in a manner that enhances school effectiveness. This matter has become more urgent in an environment where the non-filling of vacated HoD posts has become a way for provincial departments to deal with very serious budget constraints, constraints which are aggravated by poor planning capacity. Between 2012 and 2016, the number of schools-based HoDs declined by 7%, or around 3,400 people. One province, Limpopo, has essentially halted the filling of all vacated HoD posts.

Despite these cost-cutting measures, over 4,000 teachers a year have become HoDs in recent years. The key aim of the report is to examine what factors drive the selection of teachers for HoD posts in the 2014 to 2016 period, using administrative data available within the DBE.

This report breaks new ground in the sense that scores from the IQMS performance management system, previously not available in the Persal payroll system, are used. Moreover, union affiliation data in the payroll system are used for the first time for analytical purposes.

Through a multivariate analysis (a logistic regression), the strength of the association between various teacher factors, and one's probability of being promoted into an HoD post, are examined. Overall, there are three key findings.

Firstly, the IQMS scores of teachers are rather well correlated with HoD promotions. This is a pattern one would want to see, but there was no guarantee that it would be found. On the one hand, it is widely believed that the IQMS system adds little value to schools, in part because schools do not take the evaluations of teachers seriously. The latter perception rests to a large degree on the fact that there are no formally established consequences, positive or negative, for achieving better or worse IQMS scores. For instance, these scores are virtually never considered when promotions occur. On the other hand, there is a widespread perception that promotions are unduly influenced by, in particular, teacher unions seeking to ensure that particular individuals, not necessarily the most capable teachers, are promoted. The fact that IQMS scores should be highly correlated with HoD promotions therefore comes as a pleasant surprise. It suggests that on the whole the IQMS is able to gauge teacher quality and that more capable teachers are being promoted.

But certain problems with the IQMS system are apparent. Apart from IQMS scores, IQMS overall categories are now available in the payroll data. The distinction between the top two categories, 'good' and 'outstanding', appears to be fairly arbitrary, and how they relate to the scores is unclear. Overall category does not appear to predict who becomes an HoD well. 40% of teachers are in schools where every teacher has the same overall IQMS category, and 9% of all teachers are in schools where every teacher is classified as 'outstanding' – these latter schools tend to be in poorly performing pockets of the country. Clearly IQMS scores are taken more seriously than the overall IQMS categories.

The second key finding is that statistics on union affiliation and the likelihood of becoming an HoD do *not* suggest that being a member of the largest union, SADTU, is associated with a stronger chance of being promoted. Such a dynamic is implied by recent analyses. In fact, membership of NAPTOSA seems to carry a slight advantage when it comes to becoming an HoD. This is not to say the problem of undue union influence does not exist. The data that the current report relies on is simply affiliation, as indicated by teacher union deductions on the payroll system. If, for instance, certain office-bearers of certain unions are being unfairly advantaged, then this would not be reflected by the data. Yet it seems important to confirm that SADTU members are on the whole not more likely to become HoDs than members of other unions.

The third key finding points to a clear problem: a bias against the appointment of female HoDs. Nationally, the overall probability of becoming an HoD within the year is 1.6%. On average, and when controlling for a number of additional factors, the gap between men and women is 0.9 percentage points, in favour of men.

1 Introduction

Schooling systems around the world grapple with how to improve incentives for teachers, in the broad sense of the word 'incentive'. In this broad sense, any factor, whether monetary or non-monetary, which keeps teachers satisfied in the profession, with a sense that extra effort and exceptional talent are appreciated, counts. There is now a reasonably good stock of literature and analyses from other countries, including developing countries, which we can learn from[1]. In South Africa, some work has occurred, but there has not been enough[2]. In particular, proposals in South Africa tend to deal with teacher incentives in too piecemeal a fashion, without a holistic framework of how the various factors interact.

The current report is not aimed at presenting an overall framework for teacher incentives in public schools in South Africa. That work must still be done. What the report does is to open up an important but mostly unexplored area: promotion into a head of department (HoD) position in a school. HoDs serve specific roles in schools according to policy, and undoubtedly assume additional roles determined within schools and not really covered in the policy. The almost 50,000 HoDs in public schools also represent an important incentive, arguably the largest in monetary terms, for the just over 300,000 level 1 teachers. If the system works as it should, the best teachers should become HoDs. Key figures for understanding HoDs as part of the incentive structure governing teachers are the following: overall in the schooling system there is one HoD position for every seven teacher positions; promotions to HoD per year as a percentage of teachers, or the likelihood of being promoted, has been 1.6% in recent years; the total pay of an HoD is on average 35% higher than that of a teacher; when a teacher becomes an HoD, the average pay increase experienced is 20%. These figures suggest that the possibility of becoming an HoD is something that could incentivise teachers in important ways.

The current report is partly intended to strengthen the argument that HoDs are important and that the filling of HoD posts should be prioritised in the current climate of budgetary

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[1] An excellent resource, dealing with a range of Latin American countries, is that of Vegas and Umansky (2005).

[2] See for instance Armstrong (2014), Education Labour Relations Council (2011) and Gustafsson (2012). Wills (2015) provides an analysis similar to this one insofar as it examines (amongst other things) who becomes a school principal in South Africa, using Persal data. A key finding is that historical patterns of inequality are in part perpetuated by the fact that when poorer schools obtain new principals, these principals tend to have relatively few years of experience in the teaching profession. Teachers from advantaged schools tend to become principals in advantaged schools and teachers from disadvantaged schools tend to become principals in disadvantaged schools. This contributes towards the persistence of historical patterns of inequality.

constraints. What is worrying is that the number of HoDs in schools has declined by 7% between 2012 and 2016, from 46,776 to 43,391, as provincial departments have left vacant posts empty in order to deal with budget constraints, but also to some degree as a result of weak planning[3]. The following map illustrates where in the country the problem has been greatest, with reference to the 2014 to 2016 trend (during this period the overall national decline in HoDs was 4.3%). The situation in Limpopo reflects the fact that since 2014 the appointment of any HoDs has been virtually halted in this province.

Figure 1: 2014 to 2016 declines in HoDs by district
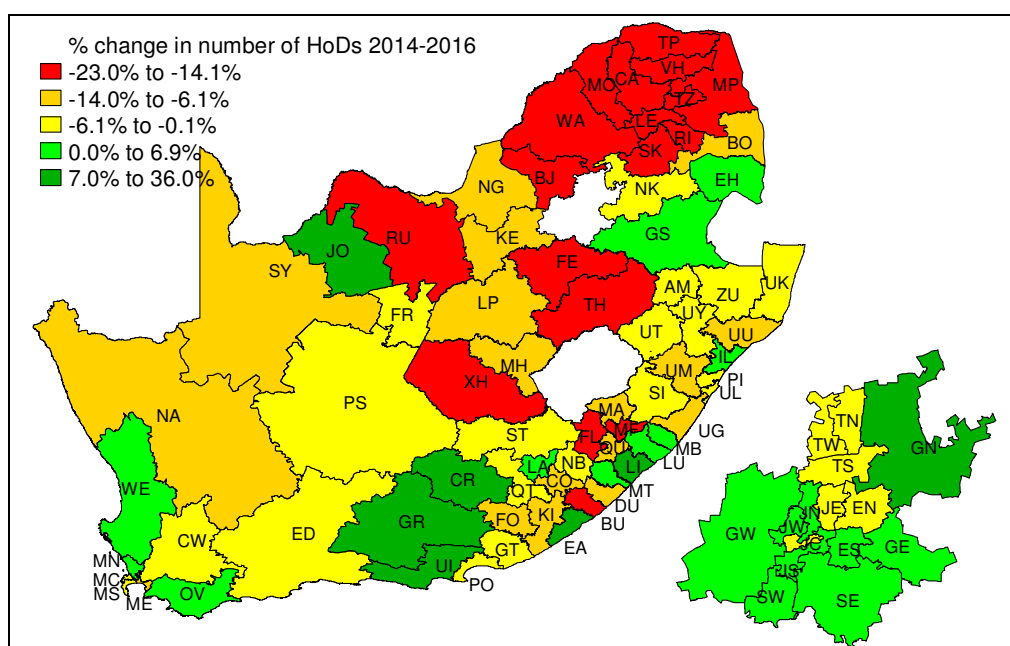
Note: District codes are explained in Appendix 1.

Section 2 below describes an important data source which has now become available. Increasingly, provinces have succeeded in capturing IQMS scores on the Persal payroll system[4], creating new opportunities for understanding the performance management system governing teachers. The data suggest that scepticism over IQMS is not entirely justified. In parts of the system, it clearly does not function well, but in other parts it does. The IQMS emerges as a useful tool for gauging teacher quality, and this is turn is important for examining whether the right people are becoming HoDs.

Section 3 provides a few descriptive statistics relating to the age, race and gender of teachers who became HoDs in recent years.

Section 4 presents an analysis of the patterns of union affiliation, using Persal data on union membership fee amounts. These patterns do in fact line up to some degree with the HoD promotion patterns, as will be seen in the multivariate analysis, and hence it seemed important to consider the union fee data.

Section 5 presents the crux of the report. Through a multivariate analysis, it is established what factors are most strongly associated with becoming an HoD. The data that were available, whilst rich, do not allow for all key questions relating to HoDs to be fully explored. For instance, the question of how the availability of promotion opportunities influences

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[3] See separate report accompanying this one titled *Personnel spending pressures: Hiring and promotion cuts with enrolment growth* (15 October 2017).
[4] Three Persal downloads, for October 2014, November 2015 and November 2016 were used.

teacher behaviour cannot be explored using these data[5]. Yet the analysis presented below represents an important step towards a better understanding of HoD promotions as a form of incentive for teachers.

2   The newly available IQMS data on Persal

For over a decade, the Integrated Quality Management System, or IQMS, has governed the way educators assess their own capabilities and have this peer reviewed by colleagues and managers[6]. Level 1 teachers determine a score, from 1 to 4, within 28 'criteria', categorised into seven 'performance standards'. This means the maximum total is a score of 112. A threshold score of 56 points must be reached for an educator to receive the annual salary notch increment. This is the only direct link between IQMS and pay, though it could be argued that there are other, indirect links. For instance, consistently high IQMS scores may make an educator more eligible for a promotion, if for instance the IQMS process helps to make the school principal more aware of the strengths of the teacher. Importantly, there is no formal requirement to consider IQMS scores in any promotion process, and it seems as if IQMS scores are in fact almost never considered, at least in any deliberate way, when a promotion occurs.

From 2014, seven provinces, all except for Gauteng and Western Cape, have been relatively successful in ensuring that all IQMS scores are captured on the Persal payroll system. Table 1 below indicates success rates with respect to just level 1 teachers (IQMS scores for higher levels have also been captured on Persal, but those data are not used in the current report). The year is the year of the IQMS cycle (not when the data were captured).

Table 1: Percentage of teachers with IQMS scores

|	2014	2015
EC	94	92
FS	86	84
GP	0	0
KN	0	78
LP	86	78
MP	90	17
NC	75	77
NW	78	78
WC	0	0
SA	46	56

It is often best to view the patterns in the data at the province level, given that provinces pursue slightly different approaches (as will be seen). Figure 2 illustrates the distribution of scores for Free State, with the data for 2014 and 2015 combined. It also illustrates the 'overall category' assigned to each teacher. The category 'unacceptable' (meaning a score less than 56) is not visible in the graph as only 0.1% of teachers in Free State were assigned this category. The little peak at a score of 56 is indicative of a few teachers who would 'just make it' into the 'satisfactory' category. The differentiation between 'satisfactory' and 'good' is clean: one needs to have a score of at least 78 to be considered 'good'. What is not 'clean' is the differentiation between 'good' and 'outstanding'. Teachers can be 'outstanding' with, say, a score of 85, yet even at a score of 100, most teachers are 'good'. What instructions actually guide the differentiation between 'good' and 'outstanding' in the system, and whether there

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[5] There are in fact very few data analyses which have succeeded in throwing light on these types of questions. One outstanding analysis is that of Karachiwalla and Park (2015), which finds that promotions into HoD-like positions in China do influence teacher behaviour in important and positive ways.

[6] The details of the policy are outlined mainly in Resolution 8 of 2003 of the Education Labour Relations Council (ELRC).

was perhaps a data capture problem around the categorisation 'outstanding' is a matter that is being followed up. (It seems unlikely that it would be a data capture problem, as it is unlikely that six different provinces would separately produce the same erroneous data patterns.)

Figure 2: IQMS score and overall category distributions in Free State
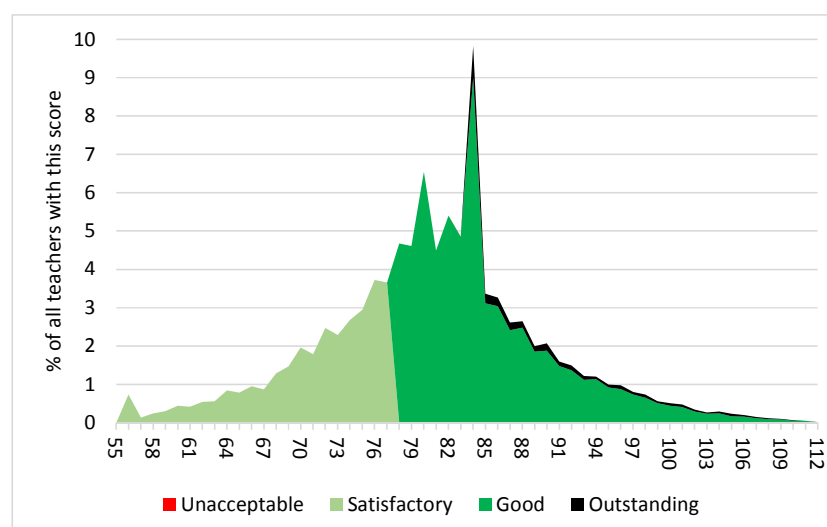
Note: Layers in the graph are stacked and do not overlap.

Table 2 and Table 3 below provide details for all the provinces with overall category level values (the data for 2014 and 2015 were combined for this analysis). KwaZulu-Natal is excluded as although this province had scores for 2015, overall categories were missing throughout. What is clear from Table 3 is that whilst the minimum threshold for 'good' is virtually the same across all provinces, the same cannot be said for 'outstanding'. And within every province, the maximum values in the second column exceed the minimum values in the third column, meaning that in all provinces there are teachers with the same score who, in some instances, would be 'good', and in other instances 'outstanding'. What is not shown in the tables is that the mode, or most common value, is 84 in all provinces (this is the highest peak in Figure 2). A score of 84 is what one obtains if a value of 3 is assigned across the 28 criteria. This probably explains the 84 peak. There are few values exceeding the maximum possible of 112: overall only 0.2% of values do (counting level 1 teachers only), with the highest figure being that of KwaZulu-Natal, at 0.7%. Table 2 indicates that provinces differ to a large degree in their level of IQMS 'leniency'. To take two extremes, a teacher's chances of being in what is effectively the lowest overall category, 'satisfactory', is four times as great in Free State as in North West. Put differently, North West is in general far more lenient in its scoring.

Table 2: Provincial distributions across overall categories

	Un-acceptable	Satisfactory	Good	Outstanding	Total
EC	0.2	14.6	48.5	36.7	100.0
FS	0.1	31.1	65.5	3.3	100.0
GP					
KN					
LP	0.1	17.2	61.3	21.4	100.0
MP	0.1	13.4	83.0	3.5	100.0
NC	0.1	19.7	68.8	11.3	100.0
NW	0.1	7.6	86.8	5.5	100.0
WC					
Total	0.1	16.8	62.9	20.2	100.0

Table 3: Ranges for 'good' and 'outstanding' per province

|	Good		Outstanding	
	P'tile 1	P'tile 99	P'tile 1	P'tile 99
EC	78	109	78	109
FS	78	105	84	110
GP				
KN				
LP	78	108	78	111
MP	78	110	84	112
NC	78	107	95	112
NW	78	108	79	110
WC				
Total	78	109	78	111

Note: 'P'tile 1' refers to percentile 1, meaning the average within the bottom 1 per cent. This is more informative than the minimum, which in some provinces is clearly 'dirty data'. 'P'tile 99' refers to the average in the 99th percentile.

Figure 3 and Figure 4 below describe the distribution of teacher scores per province, with the second graph being simply a magnification of the first. Here KwaZulu-Natal is included. The peak at a score of 84 is highest in North West – here 16% of teachers obtain this – and lowest in Mpumalanga – only 5% of teachers. In the second graph it is clear that obtaining high scores is easier in Mpumalanga than Free State (the assumption used here is of course that teachers in the two provinces are not substantially different in real terms). In Table 4 one sees that the difference in the averages (means) between the two provinces amounts to around a whole national standard deviation, meaning an unbelievably large gap, or a gap so large that if it were real would suggest that the two provinces were not different provinces in the same country, but from different countries.

Figure 3: IQMS score and overall category distributions in Free State

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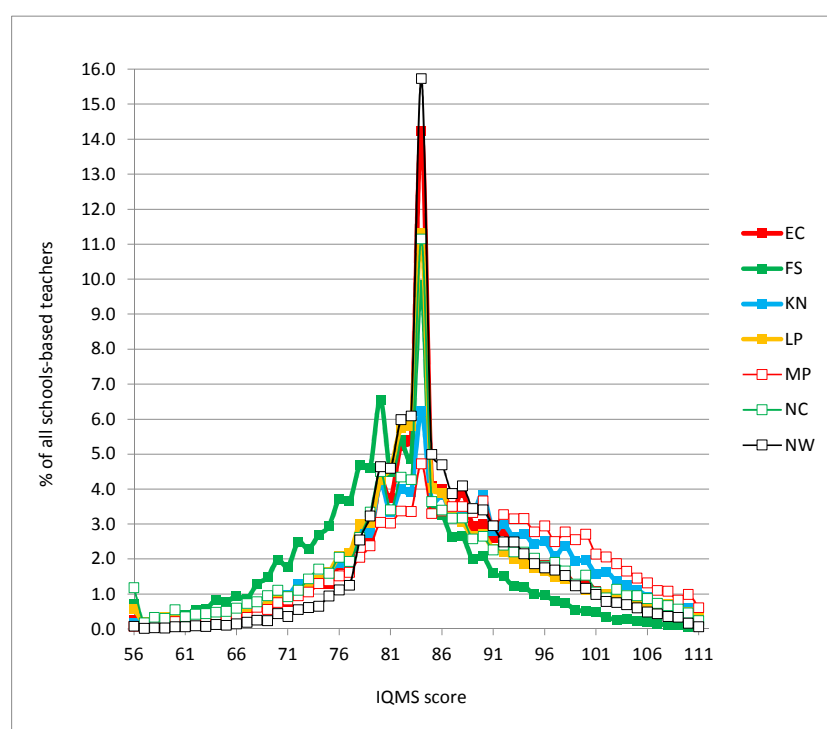
Figure 4: IQMS score and overall category distributions in Free State
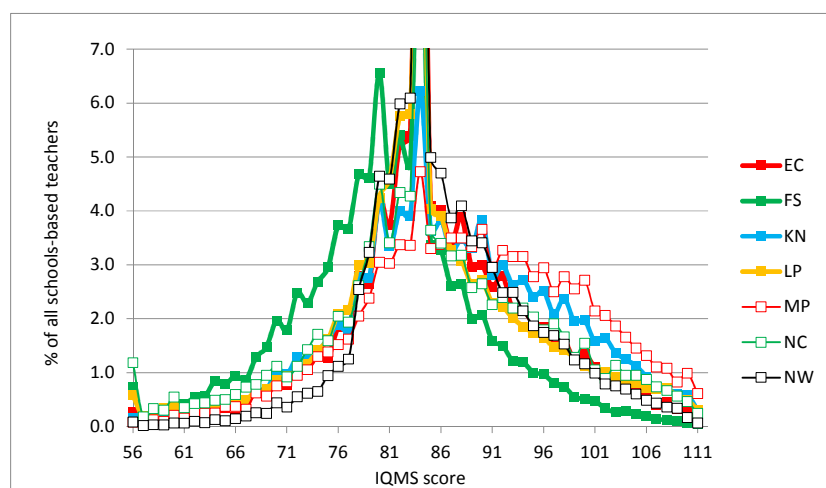
Table 4: Summary statistics for score values for teachers

|	Median	Mean	Standard deviation
EC	84	85.6	9.3
FS	81	80.9	9.0
GP			
KN	86	87.0	10.5
LP	84	85.1	10.2
MP	89	89.0	10.7
NC	84	85.0	10.9
NW	84	86.4	7.9
WC			
Total	84	85.6	10.0

Table 5 illustrates a crucial element of the IQMS. One would want to see variety within schools with respect to IQMS overall categories and scores. If one does not find this, meaning if everyone in a school tends to carry the same IQMS values, a fundamental purpose of the IQMS is not being fulfilled, namely the purpose of acknowledging that within a school there are differences in the quality of teachers. Without this acknowledgement, there is no basis for deciding who needs support, or who can be given more responsibilities, or even promoted. If one focusses on overall categories, then 40% of teachers are in schools where there is *no* differentiation across teachers (keeping in mind that the data exclude three key provinces). This is shown in the bottom line of Table 5. Where there is variety, the most common combination is some 'satisfactory' and some 'good' – 31% of teachers are in schools like this. What should raise eyebrows is that around 9% of teachers are in schools where everyone is considered 'outstanding'. The map in Figure 5 below indicates that the schools in question are concentrated in two particularly poor parts of the country. Clearly in these schools the IQMS is not working as it should. Schools with fewer than five teachers were dropped in the analysis, so the smallness of the schools is unlikely explain the bulk of this phenomenon. Primary and secondary schools were about equally represented amongst these 'red dot' schools.

Table 5: Within-school variety in IQMS overall categories in 2015

Un-accept-able	Satis-factory	Good	Out-stand-ing	EC	FS	LP	MP	NC	NW	Total
	●		●	19.2	69.1	23.7	66.3	29.4	25.0	31.0
		●		26.9	13.5	33.3	28.4	9.6	55.9	28.7
		●	●	12.3	2.9	13.8	0.5	22.4	12.2	11.5
	●	●	●	10.6	10.1	7.2	0.0	35.1	6.8	10.0
			●	16.7	0.9	10.0	0.0	0.5	0.0	9.2
●			●	10.5	0.2	6.3	0.0	0.1	0.0	5.7
●				1.9	2.2	4.8	1.5	1.7	0.1	2.7
Other combinations				1.9	1.0	0.8	3.3	1.1	0.0	1.3
Total				100.0	100.0	100.0	100.0	100.0	100.0	100.0
% in 'mono-category' schools				44.6	16.4	47.8	29.0	11.7	56.0	40.1

Note: Values refer to percentages of level 1 teachers. The table draws from the data of 87,498 teachers. 10,322 teachers were dropped because they were in schools with fewer than 5 teachers. Very small schools were excluded as they would by their nature be more inclined to display less within-school variation, even if the IQMS programme was well implemented.

Figure 5: Schools with all teachers 'outstanding'
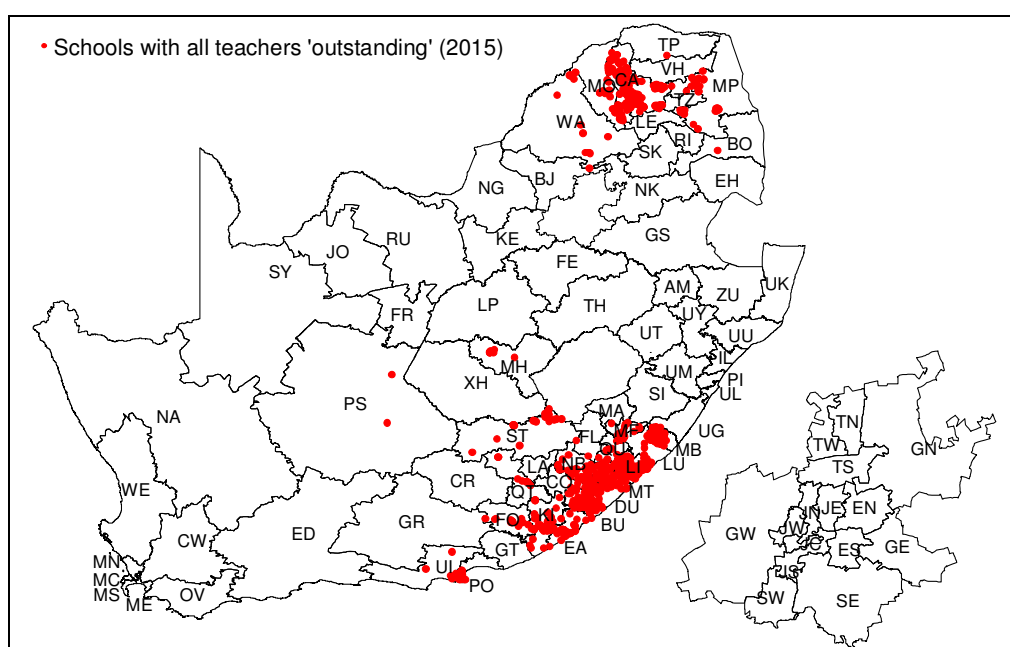
Note: The markers represent 807 schools. Schools with fewer than five teachers have been excluded. The codes refer to the 86 education districts. Note that provinces with no data according to the previous table could be not be analysed for the current map.

Figure 6 below illustrates the matter of within-school IQMS differentiation by district. Clearly, IQMS works best across Northern Cape, and several Free State districts. But within one province there can be considerable variation: in Eastern Cape the neighbouring districts of Graaf-Reinet (GR) and Fort Beaufort (FO) are in the best and worst categories respectively[7].

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[7] One previous analysis of this kind has been undertaken, using school-level aggregate statistics on overall IQMS categories, collected by the nationally employed IQMS monitoring officials. That analysis, in Department of Basic Education (2015), produces a similar picture to that seen in Figure 6. It moreover indicated that Western Cape and Gauteng displayed high levels of within-school differentiation.

Figure 6: Within-school variety in IQMS overall categories in 2015 by district
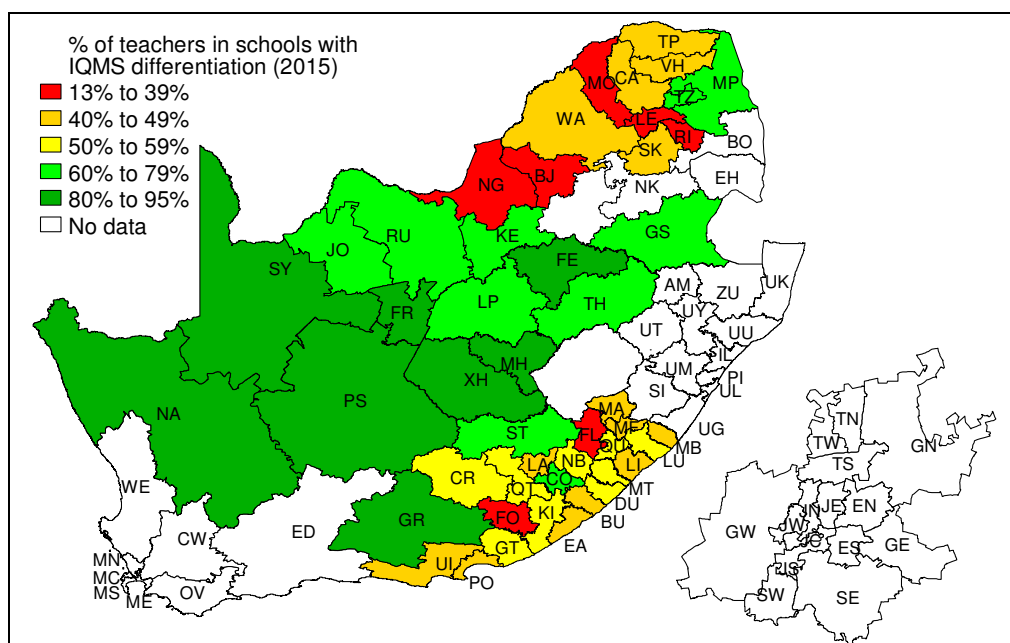
Note: Schools with fewer than five teachers have been excluded. The codes refer to the 86 education districts and are explained in Appendix 1.

Only in 59 non-small schools, or 0.5% of the non-small schools for which data were available, did all teachers have the same IQMS *score*. In 5% of small schools, meaning here schools with between two and four teachers, did everyone have the same score. What seems particularly important to monitor with respect to scores is the gap between the minimum and maximum within a school, counting just level 1 teachers. This gap varies considerably, for instance across districts – see Figure 7 below – along the lines of what was seen in the previous map. KwaZulu-Natal emerges as a relatively effective province with respect to within-school IQMS score variation. In fact, in an earlier analysis of the IQMS, KwaZulu-Natal was found to be the only province, of all nine, where there was a correlation between Grade 12 examinations performance and the IQMS overall category of the school principal, counting just the poorer quintiles 1 to 3 schools[8].

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[8] Department of Basic Education, 2015: 61.
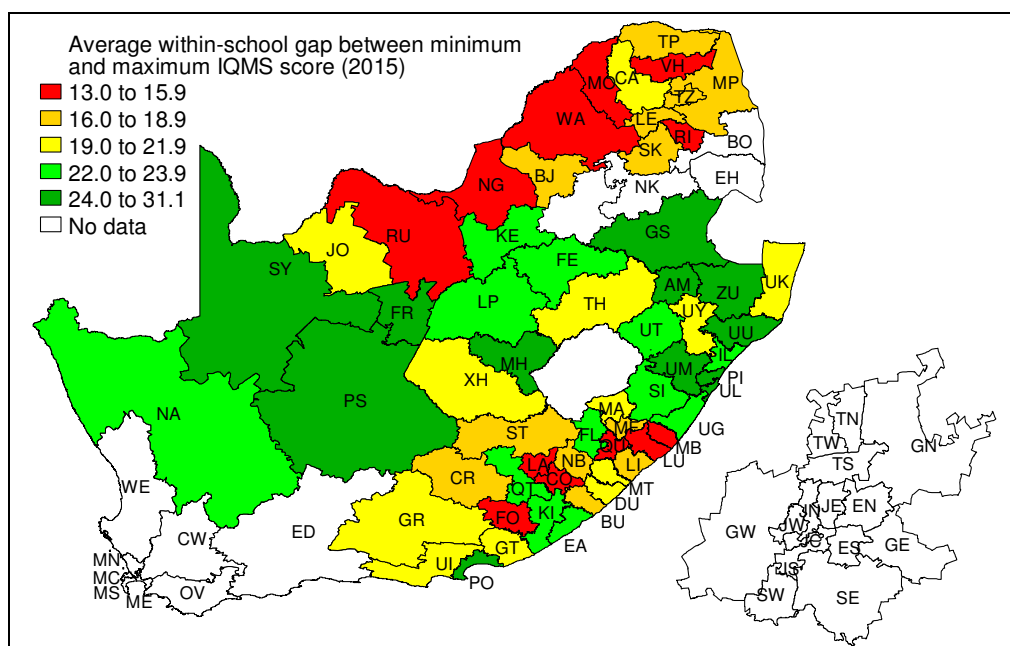
Figure 7: Within-school range in IQMS scores in 2015 by district

Note: Schools with fewer than five teachers have been excluded. The codes refer to the 86 education districts.

Table 6 below examines differences in the IQMS scores of individual teachers in the two years for which data were available. These statistics are important to track, but they are not easy to interpret in terms of policy. To take a couple of examples, it is clear that IQMS scores move around from year to year more in Free State than Eastern Cape. However, whether this points to better practices in one province relative to the other is not clear.

Table 6: IQMS score correlations across years 2014-2015

	Teachers with data	% with same score	% with same score being 84	Average difference	Correlation coefficient
EC	33,325	24	7	4.1	.74
FS	11,711	14	3	4.6	.72
LP	28,440	17	4	6.0	.63
MP	3,530	13	1	5.2	.74
NC	4,058	22	5	4.6	.75
NW	6,812	21	8	3.7	.71
	87,876	20	5	4.8	.70

3   Age, gender, race and school of promoted teachers

This section provides a few views of commonly used Persal variables, relative to becoming an HoD. Figure 8 displays the ages of those promoted in the 2014-2016 period (the values are annual averages). The likelihood of being promoted peaked at age 40. This likelihood is moreover fairly high even for younger teachers, but the absolute number of younger promotees is not high given that there are fewer young teachers in the public system than there should be. The proportion of promotions involving a move from one school to another are fairly high. Of the 4,294 promotions per year represented in the graph, 26% involved a move to another school (see Table 7 below). However, as little as 1.0% of the promotions involved a move to another province.

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Figure 8: Promotion to HoD by age
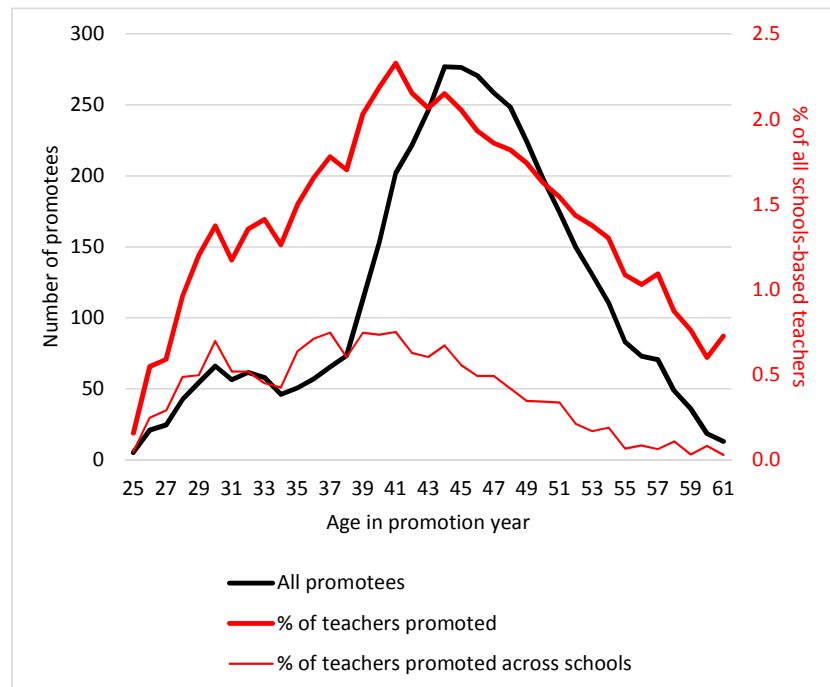
Note: The graph draws from the data of 279,669 teachers found in 2014 and 2015, and 271,862 found in 2015 and 2016. Numbers were divided by two to obtain averages per year. The reasons the values are lower than the just over 300,000 level 1 teachers in public employment are, firstly, that only teachers in locations which could be identified as public ordinary schools in the data were considered and, secondly, that teachers present in just one of the two adjacent years were not counted.

Figure 9 provides provincial versions of the '% of teachers promoted' curve from the previous graph. The peaks in the curves differ quite markedly. For instance, the best probability of promotion for Eastern Cape teachers is at around age 35, whilst in Northern Cape and Western Cape it is around age 45.

Figure 9: Promotion to HoD by age and province
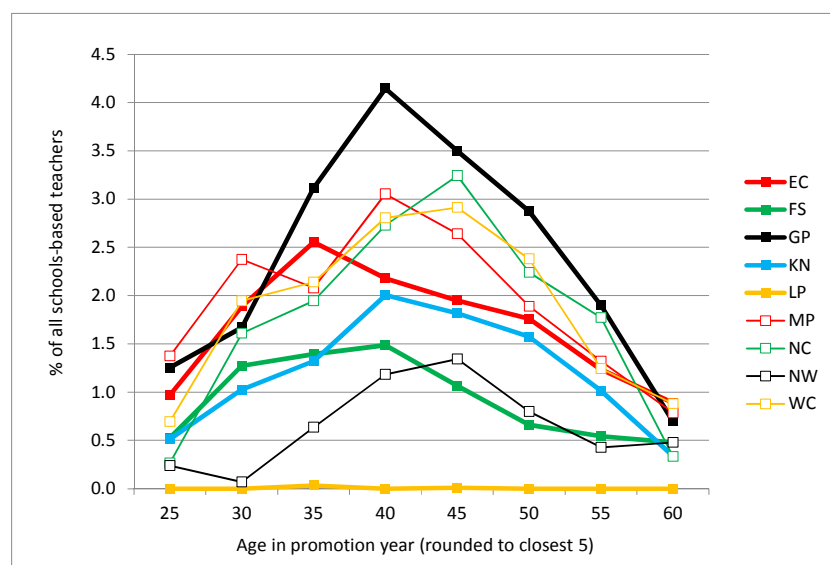
Note: Province in the second year (either 2015 or 2016) was considered.

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Table 7: Provincial statistics on promotions to HoD

	Promotions of teachers into HoD posts per year (average 2015-2016)	% of promotions involving a school move
EC	741	28
FS	148	36
GP	1,218	23
KN	1,003	27
LP	2	33
MP	522	33
NC	137	19
NW	123	51
WC	404	16
SA	4,294	26

One pattern that will emerge from the multivariate analysis is a bias against women in the promotions process. A few basic percentages appear in Table 8 below. Whilst 68% of teachers are female, a lower 64% of promotions occurring between 2015 and 2016 were of women. This gap is not very large, but as will be seen in the multivariate analysis, it is present across all provinces. Women principals were slightly more inclined than male principals to appoint women HoDs. 66% of HoDs appointments in women-led schools (22 over 33) were of woman teachers, against a figure of 63% in schools led by male principals (42 over 67).

Table 8: Gender of teachers and their principals

Everyone			
Principal➡ ⬇Teacher	Male	Female	Total
Male	24	8	32
Female	44	24	68
Total	68	32	100
Just promotions			
Principal➡ ⬇Teacher	Male	Female	Total
Male	25	11	36
Female	42	22	64
Total	67	33	100

Note: The values are all percentages of teachers.

A similar table for race appears below. Whilst it appears that black Africans experience a bias when it comes to promotions – 81.2% of teachers are black African, whilst they constituted a somewhat lower 78.6% of 2015-2016 promotions – the multivariate analysis will show that black Africans are somewhat advantaged when one controls for other factors such as age.

Table 9: Race of teachers and their principals

Everyone					
Principal➜ ⬇Teacher	Black African	Coloured	Indian	White	Total
Black African	76.4	1.3	1.0	2.5	81.2
Coloured	0.3	6.4	0.1	0.8	7.6
Indian	0.4	0.2	1.9	0.3	2.7
White	0.5	0.7	0.2	7.2	8.5
Total	77.6	8.5	3.2	10.7	100.0
Just promotions					
Principal➜ ⬇Teacher	Black African	Coloured	Indian	White	Total
Black African	74.3	1.5	1.1	1.7	78.6
Coloured	0.6	7.9	0.2	0.8	9.4
Indian	0.4	0.2	1.5	0.3	2.4
White	0.4	0.8	0.1	8.2	9.6
Total	75.7	10.4	2.9	11.1	100.0

4   Union monthly fee amounts

Teacher union deductions in the payroll data for October 2014 were analysed in order to see whether these data were correlated to HoD promotions. As will be seen in the next section, interesting correlations do in fact emerge in a multivariate analysis. In Persal, only one union membership per teacher would be reflected. It is also possible for teachers to pay fees to other unions outside of the Persal deductions system. In total 60 different non-zero deduction amounts were found. Only around 7,000 of 280,000 teachers had no union deduction. Of the 60 amounts, seven amounts accounted for 98% of all non-zero observations. These seven amounts are reflected in Table 10 and Table 11 below.

Table 10: Union contribution amounts and province

Monthly	EC	FS	GP	KN	LP	MP	NC	NW	WC	SA
R10.00	4,071	2,178	12,619	11,415	4,593	4,226	1,902	4,651	4,809	50,464
R68.00	120	214	415	13,448	18	595		91		14,901
R70.00	27,608	8,243	15,147	33,990	31,478	15,106	2,787	9,149	7,535	151,043
R80.00	145	9	991	37	3,557	607	35	521	1	5,903
R83.20	5,916	1,691	5,115	3,292	155	1,023	395	1,493	4,132	23,212
R87.50	1,760	2,433	4,704	683	644	1,509	869	1,238	2,321	16,161
R128.00	99	55	134	1,667	18	157		16		2,146
	39,719	14,823	39,125	64,532	40,463	23,223	5,988	17,159	18,798	263,830

Table 11: Union contribution amounts and race

Monthly	Black African	Coloured	Indian	White	All
R10.00	40,311	4,706	1,338	4,109	50,464
R68.00	14,752	17	109	23	14,901
R70.00	140,709	6,548	3,367	419	151,043
R80.00	5,890	6	5	2	5,903
R83.20	11,389	4,901	2,490	4,432	23,212
R87.50	899	1,357	71	13,834	16,161
R128.00	2,120	5	20	1	2,146
	213,950	17,535	7,380	22,819	261,684

Figure 10: Geographical distribution of different union fees
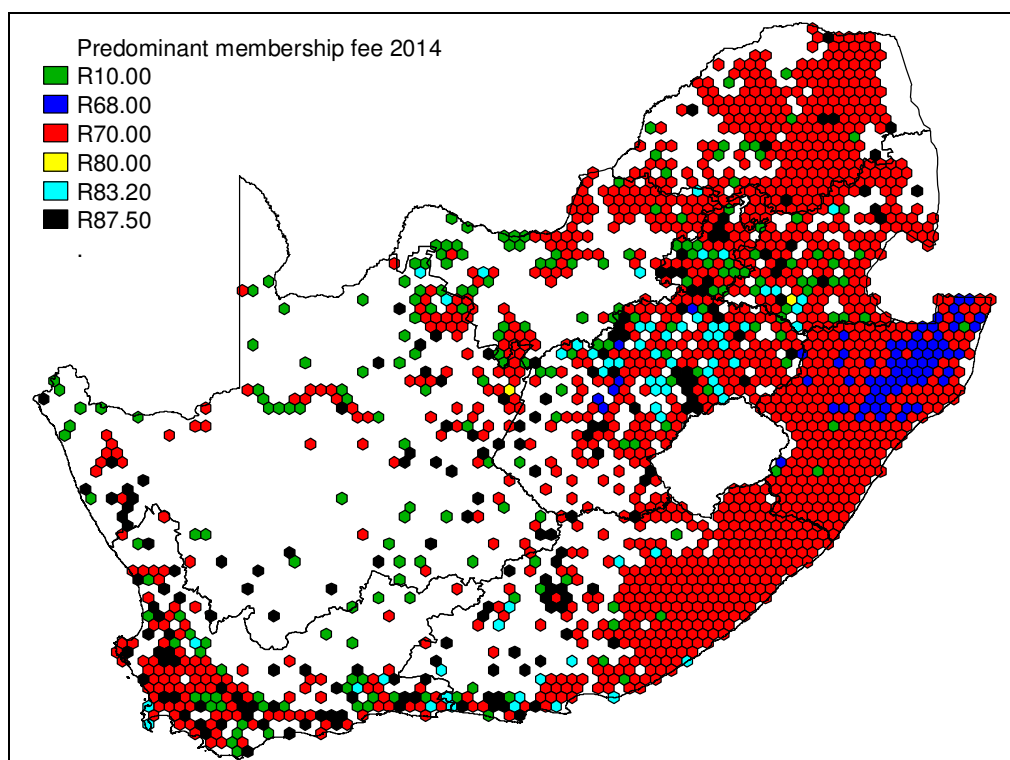
Note: 'Points' in this map represent not schools, but hexagons within which schools are found.

Figure 10 above reflects the geographical distribution of the different deduction amounts. The previous two tables and one map, plus a conversation with a DBE official who deals with union deductions, led to the linking of amounts to specific unions seen in Table 12.

Table 12: Union names

Monthly	
R10.00	Unaffiliated
R68.00	NATU
R70.00	SADTU
R80.00	PEU
R83.20	NAPTOSA
R87.50	SAOU
R128.00	Unknown

Table 13 displays the basic (bivariate) relationship between union membership and being promoted to HoD. This picture is not that different from what emerges in the multivariate analysis that follows.

Table 13: Union membership and HoD promotions

Union category	Level 1 teachers 2014	Number becoming HoDs by 2015	% becoming HoDs by 2015
Unaffiliated	50,464	473	0.9
NATU	14,901	220	1.5
SADTU	151,043	2698	1.8
PEU	5,903	79	1.3
NAPTOSA	23,212	544	2.3
SAOU	16,161	309	1.9
Unknown	2,146	54	2.5
Total	263,830	4,377	1.7

SADTU is clearly the dominant union, accounting for 72% of teachers who have some union affiliation. Yet having a mix of unions amongst the teachers of one school is fairly common. 93% teachers are in schools where at least one teacher is a SADTU member, but at the same time 67% of teachers are in schools where SADTU co-exists with at least one of the four other unions (counting only level 1 teachers, and excluding small schools with fewer than five teachers). Table 14 below displays the largest combinations.

Table 14: Within-school variety in level 1 teacher union membership 2014

Un-affiliated	NATU	SADTU	PEU	NAP-TOSA	SAOU	Unknown	% of teachers
●		●					18.8
●		●		●			18.4
●	●	●					9.4
●		●	●				8.9
		●					5.8
●	●	●					5.5
●		●		●			4.9
						Other combinations	28.4
						Total	100.0

Note: Schools with fewer than five teachers were excluded from the analysis.

5 Multivariate analysis of who is promoted

This section presents the result of a number of multivariate analyses, specifically logistic regressions, which provide the conditional correlation between, on the one hand, becoming an HoD and, on the other, up to 17 explanatory variables. Because the analysis is multivariate, and not bivariate, correlations take into account the multiplicity of simultaneous relationships occurring. The following example illustrates this. Imagine one finds a high bivariate (two-way) correlation between being female and becoming an HoD, but also a high positive correlation between age and becoming an HoD. If females tend to be older, then one may ask whether it is age or being female which contributes to one's becoming an HoD. It could of course be both factors, but then is there a way of knowing how much each factor 'influences' the result? The multivariate analysis presented below helps answer these kinds of questions.

It should be emphasised that the models presented here are relatively basic. Further information could be extracted with further analysis. In particular, all the models assume that relationships are essentially linear. Exploring non-linear relationships would be an important next step if this analysis were to be taken forward. The results are thus 'first-cut' results, or results from a basic multivariate analysis.

The statistics in Table 15 are arranged in nine panels, one for the country, and one each for eight provinces (all except for Limpopo, which had too few HoD promotions to allow for the

analysis). In each panel, eight models are calculated. A key minimum requirement for every model in every panel was that there should be at least 25 promotions to HoD. This explains why, for instance, some models were not estimated for the small (in terms of headcounts) province of Northern Cape. Model 1 uses the most observations (or people), whilst the other seven models exclude observations as a result of either missing data or the intention to focus on a sub-group of observations. Model 2 makes use of only observations where the IQMS scores were available, whilst Model 3 excludes observations which do not have both scores and overall IQMS categories. Model 4 is like Model 3, but with the added restriction that only observations with 2014 teacher union data are included. Model 5 allows for the absence of IQMS data, but requires the presence of teacher union data. Model 5.1 is like Model 5, but covers only observations where the teacher was in the same school in 2014 and 2015 (whether the teacher was promoted or not). Model 5.2 is like Model 5, but draws only from schools which offered no schooling beyond Grade 7 in 2015. Model 5.3 draws from the Model 5 schools not used in Model 5.2.

The last row of each panel indicates what percentage of teachers in the model became HoDs between one year and the next. The second-last row indicates the number of observations used in the model. Note that in models 1 to 3, teachers could be considered twice, once for the 2014 to 2015 transition, and again for the 2015 to 2016 transition. The statistics with stars indicate the extent to which the variable in question increases or decreases the probability of becoming an HoD, according to the estimation of the model. Three stars point to the highest level of statistical significance (p is less than or equal to 0.01), whilst two and three stars point to lower levels of significance (p thresholds of 0.05 and 0.10 respectively). No statistic means the relationship was too weak to consider in the results[9]. A grey cell denotes that the variable is not considered in the model.

The 17 explanatory variables are discussed in relation to the country (the first panel), with a view to illustrating results, but also the methodology:

- **Age + 10**. Being older, specifically the difference between being age 44 and age 54, was considered (this 44 to 54 range was the assumption for all the models and panels). For the country models, being older was *negatively* correlated with being promoted into an HoD post. As will be seen, what was a better predictor of promotion was one's salary notch (obviously salary notch and age would be strongly correlated).

- **Age rank + 10**. What was a bit more important than one's 'raw age' was one's 'age rank' amongst teachers within the school, where 1 was the oldest teacher, 2 the second-oldest teacher, and so on. But the association was small. For instance, in secondary schools, the difference between being the 11th oldest teacher and the oldest teacher in the school was associated with an improvement in one's probability of becoming an HoD of just 0.1 percentage points (the 0.1 value is *negative* because a higher rank means a younger teacher, and younger teachers are *less* likely to be promoted in Model 5.3 according to variable 'Age rank + 10').

- **Is female**. Being female decreased one's probability of becoming an HoD across all models. This is worrying, and almost certainly a reflection of a traditional gender bias in the schooling system.

- **Is coloured**, **Is Indian** and **Is white**. These statistics are all expressed relative to being black African. Clearly, being coloured increased one's chances of becoming an HoD,

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[9] To illustrate, the Stata (version 12 used) commands used for Model 1 for the country were as follows: logit tohod AGE10 AGErank10 isF isC isI isW Notch10000 is2016, followed by margins, dydx(AGE10 AGErank10 isF isC isI isW Notch10000 is2016) at(AGE10=4.4 AGErank10=1 isF=0 isC=0 isI=0 isW=0 Notch10000=23).

being Indian reduced one's chances, whilst being white made little difference to one's chances. One could also say that being black African was advantageous, relative to Indian and white teachers, but not advantageous, relative to coloured teachers.

- **Notch + 10K**. Here a movement between having a notch value of R230,000 and R240,000 was considered. Such a movement improved one's probability of becoming an HoD by between 0.1 and 0.3 percentage points (as always, this is relative to the 1.2% to 1.6% probability seen in the bottom row). This relationship is what one would expect in a relatively well-functioning system. Notch, which is strongly related to years of experience, ought to drive, to a fairly large extent, who is promoted. Notch ought to be a stronger 'driver' than age, age being probably less correlated with experience than notch.

- **Score + 10**. Here moving from a score of 90 to 100 is considered in the estimation of the statistics. Such a movement is positively correlated to receiving a promotion. In fact, it improves one's probability by a large 3.4 percentage points in Model 3. This is encouraging. People who are familiar with school processes say that IQMS scores are virtually never taken into account in any formal way in the promotions process. There is no policy requirement to make this connection, and IQMS scores are often considered personal information, which should not be used or known widely. In fact, if someone applies for an HoD post in another school, there is virtually no chance that the interviewers will have any idea of the applicant's IQMS records. The fact that despite this, a positive correlation emerges, points to an important consistency in the system. Who becomes an HoD is clearly not unrelated to teacher quality. In general, teachers considered relatively good in the IQMS process are also considered good in the HoD interview process.

- **Is good** and **Is outstanding**. These IQMS categories are measured relative to being considered just 'satisfactory' (the category 'unacceptable' is so small we can safely ignore it here). Being 'good' or 'outstanding' carries negative changes to one's probability of becoming an HoD. These statistics must be viewed together with the statistics for the variable 'Score + 10'. To take an example using the Model 4 results, if one's score changes from 90 to 110, one's probability improves by 2.8 percentage points (1.4 by 2). If one is also classified as 'outstanding', one's probability declines by 1.6, taking it to positive 1.2 (2.8 minus 1.6). In contrast, if one was classified as 'good', one's net change in probability would be lower, positive 0.7 (2.8 minus 2.1). Thus as long as one's score change is large enough, being an effective teacher according to the IQMS does improve one's probability of becoming an HoD. In fact, it is one's IQMS scores, rather than one's final IQMS category, which best seems to predict whether one becomes an HoD. To put this in practical terms, a policy recommendation that the HoD interview process consider a teacher's IQMS score appears to be a better recommendation than one which says one should consider a teacher's overall category.

- **Is NATU**, **Is SADTU**, **Is PEU**, **Is NAPTOSA** and **IsSAOU**. The union affiliation variables produce a pattern fairly similar to that of Table 13. Being affiliated improves one's probability relative to not being affiliated, no matter which union one is a member of (all the probability change statistics are positive). In all models, being a NAPTOSA member carries the strongest 'returns'. This is interesting, given widespread perceptions that the largest union, SADTU, is unduly influencing promotions[10]. The statistics in the model do not support such a view. Of course the statistics here point to the general picture and could conceal certain types of undue union influence. For instance, if unions are applying undue pressure to get office-bearers in the union, as opposed to ordinary members, promoted this might not emerge in the data, though one would expect this to reduce the associations of the IQMS variables in the models. Yet is seems noteworthy that

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[10] Department of Basic Education, 2016.

the general picture produced by the statistics presented here is not one of large-scale undue union influence, at least not when it comes to promotion into HoD posts.

- **P same gender** and **P same gender**. A variable was created to mark whether the gender of the teacher and the principal were the same. The same was done for race. These variables were only used in Model 5.1, which focusses on teachers whose school did not change. The fact that these variables do not emerge as statistically significant at the national level (in a few instances they are at the province level) suggests that there is not a high degree of bias in the sense of the principal encouraging only promotions of people of his (or her) gender and race. Of course this does not detract from the general bias against women noted above. However, what the statistics suggest is that both male and female principals are guilty of perpetuating this pattern. Again, it should be emphasised that the patterns discussed here are 'first-cut' patterns emerging from a basic model. More in-depth analysis is likely to reveal what actually underlies the bias against women.

What do the province-level tables point to? On the whole, patterns are rather consistent across provinces. Yet a few noteworthy differences stand out.

- The only province where being the oldest teacher, or as close in age to the oldest teacher in the school is consistently associated with a higher probability of being promoted, is KwaZulu-Natal. This dynamic is sustained in the province in Model 2, where the IQMS score is introduced, indicating it is *both* seniority and IQMS score which drive one's chances of a promotion.

- The only province where the advantage associated with being coloured (seen in the national model) comes through clearly and consistently, is Eastern Cape. Eastern Cape is also the only province where being white is clearly advantageous. In the other provinces, with very few exceptions, the three race categories carry negative statistics, indicating that on the whole being the omitted race, black African, is advantageous.

- Of the six provinces with IQMS score data, Northern Cape produces the largest positive association, of a 3.1 percentage point increase linked to an increase in the score of 10 points (from 90 to 100) – see Model 2. This seems to confirm what was seen in Table 5, and in the preceding maps, namely that Northern Cape seems relatively good at determining the quality of teachers. Moreover, in this province people seem to act on this determination through the promotion of the right people.

- Mpumalanga and North West stand out as provinces where being 'outstanding' is far less advantageous than being 'good'. This points to a problem. It could be that the overall IQMS categories are poorly determined in these provinces, or that these provinces are weak at promoting the right individuals, or that both these factors are at play.

- What is striking is how strongly being a PEU union member is associated with being promoted in several provinces, in particular Eastern Cape, Free State, Mpumalanga and North West. A very likely explanation for this is that the virtual halting of appointments into HoD posts in Limpopo, where PEU membership has been concentrated (see R80.00 in Table 10), has led to a large number of PEU members from Limpopo applying for HoD positions in other provinces. However, if this is occurring, the data used for the analysis are not able to confirm this. There was only one PEU teacher working in Limpopo in 2014 who was an HoD in another province in 2015. It is possible that PEU teachers moved from Limpopo to another province before 2014 (specifically before October 2014, which is the month of the data), and subsequently became registered as HoDs on the payroll system. In any event, though the change in probability associated with being a PEU teacher is large, the overall number of promoted PEU teachers is small, only 79 nationally (see Table 13). To illustrate the phenomenon, of 139 PEU teachers in Eastern

Cape in 2014, five had become HoDs by 2015, implying a high promotion probability of 3.6%.

- Only in Free State is one more likely to be promoted if one's principal is the same gender – see Model 5.1. Western Cape is the only province where having the same race as one's principal carries an advantage. But both of these associations are small, the change being 0.1 and 0.2 percentage points respectively.

Table 15 (multi-page): Logistic regression results in terms of change in probability

	Reduction due to missing data in…					Reductions due to focus on…		
	1. None	2. IQMS score	3. IQMS score and cat.	4. IQMS and 2014 union	5. 2014 union	5.1. Same school	5.2. Primary	5.3 Secondary
Country								
Age +10	-0.4***	-0.9***	-2.3***	-1.4***	-0.4***		-0.3***	-0.4***
Age rank + 10	0.1***	-0.2***				0.1***	0.4***	-0.1**
Is female	-0.9***	-0.8***	-1.9***	-1.2***	-0.6***	-0.3***	-0.7***	-0.6***
Is coloured	0.5***	1.3***	4.3***	1.0***	0.2***	0.4***	0.4***	
Is Indian	-0.4***				-0.6***	-0.4***	-0.8***	-0.4**
Is white	-0.2**							
Notch + 10K	0.2***	0.1***	0.3***	0.2***	0.1***		0.1***	0.1***
Score + 10		0.9***	3.4***	1.4***				
Is good			-6.3***	-2.1***				
Is outstanding			-6.4***	-1.6***				
Is NATU				2.2***	0.7***	0.3***	0.6***	0.9***
Is SADTU				1.0***	0.7***	0.4***	0.8***	0.6***
Is PEU					0.3**		0.7***	
Is NAPTOSA				2.4***	1.1***	0.6***	1.2***	1.0***
Is SAOU				1.2***	0.6***	0.4***	0.7***	0.6***
P same gender								
P same race								
N	535678	281712	225969	128149	271595	245949	136657	134934
Prob.	1.6	1.3	1.2	1.4	1.6	1.3	1.6	1.7
Eastern Cape								
Age +10	-0.9***	-1.5***	-3.8***	-1.1***	-0.8***	-0.3***		-1.1***
Age rank + 10	0.3**				0.3**	0.2**	0.7***	
Is female	-2.0***	-2.2***	-5.8***	-1.6***	-1.4***	-0.6***	-1.2***	-1.4***
Is coloured	1.2***	1.5***	4.4***	1.2***	1.0***	0.8***	1.2***	
Is Indian								
Is white	1.0***	0.6**	1.7**	0.7*	0.8***	0.8***	0.9**	0.8*
Notch + 10K	0.3***	0.3***	0.8***	0.2***	0.2***	0.1***	0.1***	0.2***
Score + 10		1.4***	4.9***	0.5***				
Is good			-10.7***					
Is outstanding			-9.9***	0.6**				
Is NATU								
Is SADTU				0.8***	1.1***	1.0***	1.3***	0.9***
Is PEU				2.4**	2.3***	1.4*	.	2.4***
Is NAPTOSA				1.1***	1.4***	1.2***	1.4***	1.4***
Is SAOU				1.1***	1.5***	1.2***	1.7***	1.1**
P same gender								
P same race								
N	79551	73832	73812	38342	40918	38344	14584	26312
Prob.	1.9	1.9	1.9	2.4	2.3	1.8	2.2	2.4
Free State								
Age +10		-0.5***	-1.2**	-0.7**	-0.3***			-0.4***
Age rank + 10	0.4***	0.6***	1.4***	0.6**	0.3***	0.1*	0.4**	
Is female	-0.5***	-1.0***	-2.3***	-0.8***	-0.3**			-0.5**
Is coloured								
Is Indian								
Is white		-1.0***	-2.5**					
Notch + 10K	0.1***	0.2***	0.4***	0.2***			0.1**	
Score + 10		0.8***	3.0***	0.6*				
Is good			-3.7***					
Is outstanding			-5.0**					

	Reduction due to missing data in…					Reductions due to focus on…		
	1. None	2. IQMS score	3. IQMS score and cat.	4. IQMS and 2014 union	5. 2014 union	5.1. Same school	5.2. Primary	5.3 Secon-dary
Is NATU				2.3***	1.1***	0.5**		1.6***
Is SADTU				1.1***	0.7***	0.2**	0.8***	0.6***
Is PEU				4.5**	2.0**	0.9*	2.3**	
Is NAPTOSA				1.2***	0.7***	0.2**	0.6**	0.9***
Is SAOU					0.5**	0.2*	0.7*	
P same gender						0.1**		
P same race								
N	31339	26960	26957	13715	15736	14716	7387	8345
Prob.	0.9	1.0	1.0	1.5	1.5	1.0	1.6	1.4
Gauteng								
Age +10	-1.3***				-1.2***	-0.6***	-1.6***	-1.0***
Age rank + 10	-0.7***				-0.7***	-0.3***	-0.7***	-0.5***
Is female	-2.1***				-1.4***	-0.6***	-2.6***	-1.1***
Is coloured	-1.2**				-1.0*		-1.8**	
Is Indian	-2.3***				-1.7***	-0.9*	-3.4***	
Is white	-3.7***				-1.8***	-0.9***	-2.6***	-1.4**
Notch + 10K	0.4***				0.2***	0.1***	0.3***	0.2***
Score + 10								
Is good								
Is outstanding								
Is NATU								
Is SADTU					2.4***	1.4***	3.2***	1.9***
Is PEU					2.3***	1.3***	3.7***	.
Is NAPTOSA					1.7***	0.9***	2.5***	1.2***
Is SAOU					0.8*			
P same gender								
P same race						0.4**		
N	82128				40472	37509	22194	18274
Prob.	3.0				3.1	2.6	3.3	2.8
KwaZulu-Natal								
Age +10	-0.5***	-1.0***			-0.4***		-0.2**	-0.4***
Age rank + 10	-0.5***	-0.6***			-0.4***	-0.2**		-0.6***
Is female	-1.4***	-1.4***			-0.8***	-0.4***	-0.7***	-0.7***
Is coloured		.						
Is Indian	-1.2***	-1.0***			-0.8***	-0.5***	-0.8***	-0.6**
Is white	-0.8**	-1.5***						
Notch + 10K	0.3***	0.3***			0.1***		0.1***	0.1***
Score + 10		1.1***						
Is good								
Is outstanding								
Is NATU					0.7***	0.2*	0.6***	0.9***
Is SADTU					0.9***	0.5***	0.9***	0.8***
Is PEU								2.3*
Is NAPTOSA					0.5**		0.8***	
Is SAOU								
P same gender								
P same race								
N	132140	55647			65718	62398	34345	31355
Prob.	1.5	1.8			1.4	1.1	1.2	1.7
Mpumalanga								
Age +10	-0.4***	-0.9***	-4.5***	-3.2***	-0.4***		-0.5***	-0.4**
Age rank + 10	0.4***	0.4***	1.8**	1.3**	0.3***	0.5**	0.6***	
Is female	-1.3***	-0.8***	-4.1***	-2.4***	-0.5***	-0.4*	-0.8**	-0.3*
Is coloured								
Is Indian								
Is white	-0.7**	-1.2***	-6.3***					0.9*
Notch + 10K	0.3***	0.2***	1.1***	0.6***	0.1***	0.1***	0.1***	0.1***
Score + 10		1.3***	10.5***	5.3***				
Is good			-26.6***	-13.1***				
Is outstanding			-43.4***	-22.1***				
Is NATU					1.0***		1.3**	0.8*
Is SADTU				4.2***	1.0***	0.8***	1.3***	0.8***

	Reduction due to missing data in…					Reductions due to focus on…		
	1. None	2. IQMS score	3. IQMS score and cat.	4. IQMS and 2014 union	5. 2014 union	5.1. Same school	5.2. Primary	5.3 Secondary
Is PEU				8.2***	1.5***	1.3**	2.0***	1.1*
Is NAPTOSA					0.6*		1.0**	
Is SAOU							1.7*	
P same gender								
P same race								
N	47716	25727	25711	21677	24040	22377	11747	12282
Prob.	2.2	2.2	2.2	2.2	2.1	1.5	2.1	2.1
Northern Cape								
Age +10	-1.2**	-2.7***	-3.4**					
Age rank + 10								
Is female	-1.7*	-3.4**	-4.3**					
Is coloured	-2.8***	-3.3**	-4.1**					
Is Indian								
Is white	-7.0***	-10.5***	-12.7***					
Notch + 10K	0.8***	1.0***	1.2***					
Score + 10		3.2***	6.9**					
Is good								
Is outstanding								
Is NATU								
Is SADTU								
Is PEU								
Is NAPTOSA								
Is SAOU								
P same gender								
P same race								
N	6557	5105	5104					
Prob.	4.2	5.0	5.0					
North West								
Age +10	-0.3**	-0.8***	-5.2***		-0.2**		-0.3**	
Age rank + 10								
Is female	-0.9***	-1.2***	-9.7***	-7.0**	-0.4**			-0.6*
Is coloured								
Is Indian								
Is white	-1.3***	-2.2***	-18.1***	-25.1*				
Notch + 10K	0.2***	0.2***	1.3***	1.5**				
Score + 10		1.7***	16.4***	17.6***				
Is good			-36.5***	-42.6***				
Is outstanding			-41.0***	-56.2***				
Is NATU								
Is SADTU				8.3***	0.6***		0.7***	0.5***
Is PEU				12.4**	0.7***		0.9***	
Is NAPTOSA				8.1*	0.7***		0.7***	0.9***
Is SAOU					0.8*			
P same gender								
P same race								
N	27878	21878	21877	13638	17303	8408	10108	7031
Prob.	0.9	1.0	1.0	1.1	0.9	0.8	1.0	0.9
Western Cape								
Age +10	-0.3*				-0.3**		-0.3*	-0.4*
Age rank + 10								
Is female	-1.7***				-0.9***	-0.3*	-0.8**	-1.3***
Is coloured						0.2*		
Is Indian								
Is white	-0.9**							
Notch + 10K	0.2***							0.1**
Score + 10								
Is good								
Is outstanding								
Is NATU								
Is SADTU					1.2***	0.6***	1.5***	0.8***
Is PEU								
Is NAPTOSA					1.0***	0.5***	1.2***	

		Reduction due to missing data in…				Reductions due to focus on…		
	1. None	2. IQMS score	3. IQMS score and cat.	4. IQMS and 2014 union	5. 2014 union	5.1. Same school	5.2. Primary	5.3 Secon-dary
Is SAOU					1.1***	0.4**	0.7*	1.4***
P same gender								
P same race						0.2**		
N	40081				19662	18525	11327	8301
Prob.	2.0				2.2	1.9	2.3	2.0

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Appendix 1

Table 16: Education district codes used in maps

Prov.	Dist. code	District	Prov.	Dist. code	District
KN	AM	Amajuba	FS	MH	Motheo
NW	BJ	Bojanala	WC	MN	Metro North
MP	BO	Bohlabela	LP	MO	Mogalakwena
EC	BU	Butterworth	LP	MP	Mopani
LP	CA	Capricorn	WC	MS	Metro South
EC	CO	Cofimvaba	EC	MT	Mthatha
EC	CR	Cradock	NC	NA	Namakwa
WC	CW	Cape Winelands	EC	NB	Ngcobo
EC	DU	Dutywa	NW	NG	Ngaka Modiri Molema
EC	EA	East London	MP	NK	Nkangala
WC	ED	Eden and Central Karoo	WC	OV	Overberg
MP	EH	Ehlanzeni	KN	PI	Pinetown
GP	EN	Ekurhuleni North	EC	PO	Port Elizabeth
GP	ES	Ekurhuleni South	NC	PS	Pixley Ka Seme
FS	FE	Fezile Dabi	EC	QT	Queenstown
EC	FL	Mt Fletcher	EC	QU	Qumbu
EC	FO	Fort Beaufort	LP	RI	Riba Cross
NC	FR	Frances Baard	NW	RU	Dr Ruth Segomotsi Mompati
GP	GE	Gauteng East	GP	SE	Sedibeng East
GP	GN	Gauteng North	KN	SI	Sisonke
EC	GR	Graaff-Reinet	LP	SK	Sekhukhune
MP	GS	Gert Sibande	EC	ST	Sterkspruit
EC	GT	Grahamstown	GP	SW	Sedibeng West
GP	GW	Gauteng West	NC	SY	Siyanda
KN	IL	Ilembe	FS	TH	Thabo Mofutsanyana
GP	JC	Johannesburg Central	GP	TN	Tshwane North
GP	JE	Johannesburg East	LP	TP	Tshipise Sagole
GP	JN	Johannesburg North	GP	TS	Tshwane South
NC	JO	John Taolo Gaetsewe	GP	TW	Tshwane West
GP	JS	Johannesburg South	LP	TZ	Tzaneen
GP	JW	Johannesburg West	KN	UG	Ugu
NW	KE	Dr Kenneth Kaunda	EC	UI	Uitenhage
EC	KI	King Williams Town	KN	UK	Umkhanyakude
EC	LA	Lady Frere	KN	UL	Umlazi
LP	LE	Lebowakgomo	KN	UM	Umgungundlovu
EC	LI	Libode	KN	UT	Uthukela
FS	LP	Lejweleputswa	KN	UU	Uthungulu
EC	LU	Lusikisiki	KN	UY	Umzinyathi
EC	MA	Maluti	LP	VH	Vhembe
EC	MB	Mbizana	LP	WA	Waterberg
WC	MC	Metro Central	WC	WE	West Coast
WC	ME	Metro East	FS	XH	Xhariep
EC	MF	Mt Frere	KN	ZU	Zululand