OPINION | Do uniform targets help to improve schooling outcomes?

BALANCED CRITERIA SHOULD REPLACE PERVERSE PASS-RATE INCENTIVES

Nick Taylor [1]

Indicators of any activity always serve a dual purpose. On the one hand, they are measures of performance; on the other, they set targets to aim for. The problem with indicators is that they are generally achievable in one of two ways: by improving performance or by taking a short cut. A good example of the latter approach is given by the twin brothers who each ran half the Comrades Marathon and were caught out only when a sharp-eyed official noticed that in one video sequence the runner was wearing his watch on the left arm and in a later sequence the runner with same number had his watch on the right arm.

Indicators of school quality are particularly problematic because schooling is such a complex activity and its quality, consequently, difficult to measure. A simplistic set of indicators is easier to manipulate than a well-designed set. At the same time, increasing the consequences of any set of indicators tends to increase pressure towards manipulation. For example, reports of schools and even whole districts in the United States cheating in the tests used to measure progress on the No Child Left Behind accountability system are increasing, while in South Africa system-wide manipulation of the National Senior Certificate (NSC) examinations is known to have occurred in the years 1999–2003.

Pass rate

The main measure of learning achievement in South Africa is the pass rate in the NSC examination at the end of Grade 12. However, this is an unreliable indicator of quality, which is strongly correlated with the number of candidates writing the examination, with the pass rate increasing when the number of candidates decreases and *vice versa*, as is clearly shown in Figure 3.2.1.

It makes sense that the smaller the numbers in Grade 12 classes the more individual attention teachers can provide and the higher the likelihood that students will pass; this will be particularly apparent if weaker candidates are excluded from progressing to Grade 12 and from writing the exam. One way of manipulating pass rates, therefore, is to screen learners at the end of Grade 11. There is evidence that this is happening on a large scale, with a fall-off in school enrolment between Grades 11 and 12 of around one-third across the country. Take, for example, the cohort of students who entered Grade 10 in 2008 and wrote the NSC in 2010: of the one million Grade 10 students in 2008, only 54 per cent survived to Grade 12, and of the cohort who started Grade 10 in 2009, only 52 per cent made it to Grade 12 two years later (see Table 3.2.1).

Opportunity

A far more appropriate indicator of improvement in NSC results than the ubiquitously quoted pass rate would be the number of passes in absolute terms in relation to the population of 18-year-olds. There has been a steady increase in the number of learners passing in the last decade, growing from 249 831 to 364 513 (an increase of 46 per cent) over the period 1999–2010. The number passing matric as a proportion of 18-year-olds between 1990 and 2008 varies between 25 per cent and 35 per cent, a very low figure by international standards. However, the good news is that this proportion has been increasing steadily since 1999, a fact that cannot be explained by an increase in population, as population growth has remained essentially flat over this period.

Quality

Given the chronic underperformance of the South African system in comparison with many of our poorer neighbours, the highest priority should be given to improving educational quality. The quality of school outcomes depends essentially on learners' ability to analyse, describe and reason in natural and mathematical languages, in verbal and written forms. From this perspective, much obviously stands on how well the learner can speak, read and write in the language used as

medium of instruction. On this issue, the majority of South African learners suffer their greatest educational disadvantage, having to learn all their subjects in English, which for them is a second or even third language. It follows that one of the most important mechanisms for improving the quality of schooling for the greatest number would be to raise the standard of the language curricula and to improve the teaching and learning of all languages, especially the language of instruction. In this regard, the provisions in the new curriculum to be implemented in Grades 1–3 in 2012, which give greater weight to the learning of English as a subject from the very first year of schooling, are to be welcomed. At the high-school level, the fact that those who do not speak English as a home language are schooled in what is known as English First Additional Language (EFAL) is a major disadvantage. EFAL is pitched in a lower academic register than English Home Language (EHL) and, therefore, EFAL learners do not acquire as easily the linguistic resources needed to sustain sophisticated arguments in subjects such as history, biology and chemistry. Perhaps we should strive to move more schools and greater numbers of children onto the EHL curriculum and set the ratio of EHL to EFAL passes as one indicator of matric quality. Given the emotional nature of the language debate, this is likely to be a controversial proposal but, if we are serious about improving quality, one that the country needs to face.

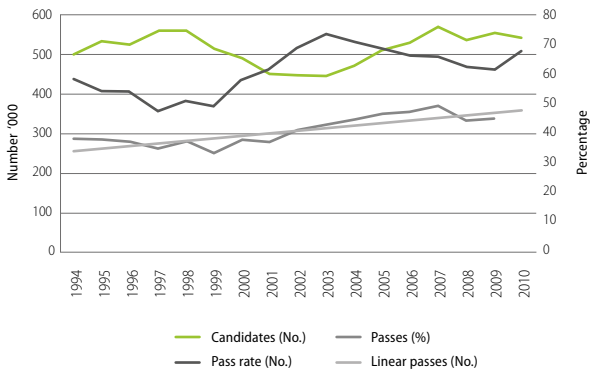
Another indicator of quality is generally taken to be the number of students qualifying to register for a bachelor's degree at university, the highest grade of NSC pass. The number of candidates obtaining a bachelor's pass has shown a marked increase in the last three years, rising from 15 per cent of the cohort in 2007 to over 23 per cent in 2010 (see Table 3.2.2).

However, universities have expressed concern over the quality of bachelor-level passes since the introduction of the new NSC curriculum in 2008. These concerns are supported by the fact that there has been a significant fall-off in numbers taking the 'difficult' subjects of mathematics, science and accounting in the last two years (see Table 3.2.3).

Since all students are required to take either mathematics or mathematics literacy, an important quality indicator for the system would be the ratio of mathematics to mathematics literacy passes. Nearly 36 000 fewer candidates registered to write mathematics in 2010 compared with 2008, and nearly 9 000 fewer passed. Over the last three years, the proportion of students taking mathematics has declined from 56 per cent of the cohort to 49 per cent (see Table 3.2.4). This indicates that principals are directing students away from mathematics towards mathematics literacy, a practice that narrows student options for further study. This is a trick for making it easier to pass and, thereby, to increase the pass rate, but it is a cynical step that disadvantages both the student and the country.

It seems that while the numbers of students qualifying to enter university are increasing, the quality of these passes is declining, certainly in terms of numbers of candidates for

Figure 3.2.1: Enrolment, passes and pass rate, Senior Certificate, 1994–2010



Source: DBE (2011a)

Table 3.2.1: Survival rates, Grades 10–12, 2008–2011

Year	Enrolment			Fall-off Grade 10–12	Percentage lost	Percentage survival
	Grade 10	Grade 11	Grade 12			
2008	1 076 527	902 752	595 216			
2009	1 017 341	881 661	602 278			
2010	1 039 762	841 815	579 384	497 143	46	54
2011	1 094 189	847 738	530 000	487 341	48	52

Source: Constructed from DBE (2010), DBE (2011a) and DBE (2011c)

Note: These figures do not take account of the many students who spend more than one year in any grade, and, therefore, give only a crude idea of survival rates.

Table 3.2.2: Bachelor-level NSC passes, 2003–2010

Year	Bachelor's pass	Bachelor's pass (%)
2003	82 010	18.6
2004	85 117	18.2
2005	86 531	17.0
2006	85 830	16.2
2007	85 454	15.1
2008	107 274	20.1
2009	109 697	19.9
2010	126 371	23.5

Source: DBE (2011a)

courses in mathematics, engineering, basic science, commerce and economics. This does not auger well for the government's plan to increase university enrolment sharply in the next five years. Not only should we be tracking numbers taking and passing mathematics in the NSC as a key systemic indicator, but we should also begin to measure the number of candidates who write the third mathematics paper, which deals with the tougher aspects of the subject and which is presently optional. Here, the universities should take the lead: for example, faculties of mathematics, statistics and engineering could set Paper 3 first as a 'recommendation for entry', and later as a requirement. In parallel, the DBE should measure and annually report on the proportion of students taking Paper 3.

Equity

An analysis of the examination results by race shows that, while Africans constitute nearly 83 per cent of NSC candidates, their low pass rate ensures that they make up only 77 per cent of passes. Furthermore, while two out of every three white children qualify for bachelor's entry, only one in five African children does. Of course, race remains strongly overlain by poverty, and the underlying problem of the figures shown in Table 3.2.5 is that it is poor children who continue to receive inferior schooling.

The same patterns are apparent in enrolments and passes in mathematics (Table 3.2.6). While the proportion of African candidates taking mathematics is surpassed only by Indian candidates, the pass rate in mathematics for Africans is less than half of that for Indians. Again, the underlying problem is poverty and the poor quality of schooling offered to children from poor homes.

The country does a lot better with respect to gender equity, a fact that places us well in advance of all developing countries on this indicator. Nevertheless, there remains room for improvement in increasing female participation and success in mathematics and science. Girl students are more numerous than boys at the top end of high school, because boys fail more frequently. However, although the participation rates of boys and girls in mathematics are comparable, female candidates do not perform as well as their male counterparts (see Table 3.2.7). While 50 per cent of male candidates passed mathematics with an aggregate of 30 per cent or more in 2009, this was the case for only about 42 per cent of females. Similarly, 33 per cent of boys passed at the 40 per cent mark, while only 26 per cent of girls did so.

Table 3.2.3: Candidates taking mathematics, physical science and accountancy, 2009–2010

Subject	Candidates		Difference	Percentage decrease
	2009	2010		
Mathematics	290 630	263 034	-27 596	9.5
Physical science	221 103	205 364	-15 739	7.1
Accounting	174 420	160 991	-13 429	7.7
Total	552 073	537 543	-14 530	2.6

Source: Reply to parliamentary question by Minister of Education, issued by Parliament, 11 May 2011

Table 3.2.4: Students taking mathematics in the NSC, 2008–2010

Year	Total NSC candidates	Mathematics candidates	Mathematics as percentage of total
2008	533 561	298 821	56.0
2009	552 073	290 407	52.6
2010	537 543	263 034	48.9

Source: DBE (2011a)

Table 3.2.5: NSC entry and passes by race

Race	Candidates as percentage of total	Pass rate	Bachelor's pass rate
African	82.7	63.2	18.3
Coloured	7.1	78.4	24.2
Indian	2.6	100.0	57.6
White	7.6	100.0	67.0

Source: DBE (2011a)

One of the most important mechanisms for improving the quality of schooling for the greatest number would be to raise the standard of the language curricula and to improve the teaching and learning of all languages, especially the language of instruction.

Conclusion

The progress of our school system towards providing quality education for all must be measured against a balanced set of indicators. Unfortunately, an exclusive focus on the pass rate provides perverse incentives for officials, principals and teachers to withhold opportunity by failing students in Grade 11 or insisting that they register as part-time candidates, and to compromise quality by moving them onto an easier subject set. We need to set ourselves more sophisticated indicators, in order to incentivise all actors in the system to improve the quality of teaching and learning, rather than to look for ways to play the system, at the expense of individual students and the country as a whole.

Opportunity should be measured by the proportion of 18-year-olds who gain a level-4 qualification. This need not necessarily be the NSC; as the country improves its FET college system and expands enrolment in that sector, the National Certificate (Vocational), which is equivalent to the matric obtained in schools, should grow and add to the proportion of young people with a level-4 qualification.

On the issue of quality, simply measuring the number of students who qualify to enter university can lead to a devaluation of this metric. A far more appropriate measure of quality is the proportion of matriculants with mathematics. More controversially, I would suggest that the proportion who take English at the Home Language level will serve as an even more important indicator of the standard of the NSC.

Regarding equity, we should move increasingly to tracking the performance of poor children in the system, the overwhelming majority of whom attend schools formerly reserved for Africans. As the country slowly deracialises its school system, poverty must replace race as the standard against which equity is measured.

Finally, the pass rate is an effective measure of efficiency, but only once indicators of opportunity, quality and equity have been computed.

Notes

1. This paper draws heavily on DBE (2011a) *Macro-indicator trends in schooling: Summary report 2011*.

Table 3.2.6: NSC entry and passes in mathematics by race

Race	Mathematics candidates as percentage of total candidates	Passed ≥ 30% (percentage)	Passed ≥ 40% (percentage)
African	50.3	41.0	24.0
Coloured	27.9	62.5	42.0
Indian	58.8	86.5	73.7
White	48.4	95.1	85.9

Source: DBE (2011a)

Table 3.2.7: Mathematics participation and success rates by gender, 2009

Gender	Mathematics participation (percentage)	Passed ≥ 30% (percentage)	Passed ≥ 40% (percentage)
Female	48.8	42.4	26.3
Male	49.1	50.2	33.0

Source: DBE (2011a)

BEWARE OF THE MISLEADING MEANS AND MEASURES

Russell Wildeman

Is the publication of public schools' performance data a desirable way to extract accountability from public institutions and promote choice in the selection of schools for our children? On the basis of available statistical evidence and the need to find fairer measures to judge schools' performance, it is argued here that school league tables provide misleading information about school quality to administrators and parents. Furthermore, it is suggested that in spite of strong external pressures to adopt performance measures in South African schools, the government would be far better served by focusing on other quality-enhancing approaches with higher international success rates.

This article firstly examines the case for the use of performance information, especially school league tables. School league tables rank schools on the basis of their learners' performance in routine examinations or, in some instances, on the results of standardised language and mathematics tests. Although different criteria can be used for ranking schools, usually a school's mean outcome on a subject is compared to its predicted outcome (controlling for a range of variables, of course) and the difference is viewed as an 'effect' of the school, hence the term 'school effects'.[1] Schools are then ranked according to the magnitude of their effects. Thereafter, the article reviews arguments and evidence against the use of school league tables as an accountability tool. The arguments for and against the publication of school league tables are then considered in the context of present debates in the education sector. Given the need for some information to gauge progress in schools, a compromise position is discussed, after which concluding thoughts are offered on the use of performance information in promoting school quality.

The case for performance information in schools

The call for comparative performance benchmarking has often been based on the perception that education standards are declining, do not exist or are variable across the schooling system. Inevitably, the incessant preoccupation with the way modern societies spend scarce government resources is related to the concern about educational standards. Proponents of public performance measures or school league tables argue that governments' resources agendas are removed from the reality of schooling, and that schools and education administration are not given any incentives to preserve or better utilise financial and non-financial resources. The same argument holds that schools are given no concrete, minimum educational standards to achieve and that this organisational practice is outdated and contributes to negative social and economic outcomes in society. Measurement of performance is seen, therefore, as a viable way to tackle the performance gap in schools, designate role expectations for those who are responsible for results (teachers, principals and administrations), devise school improvement targets, monitor such targets and take action against schools that show no visible signs of improvement. In some parts of the developed world, where such practices still exist, institutional targets are based on student performance in standardised tests of verbal (language) and numerical (mathematics) reasoning. Although the performance of individual students is measured, such results are aggregated to the institutional level and then compared to schools that have a similar schooling profile (socio-economic characteristics and school resources).

In the United Kingdom (UK), these results are published, and parents are encouraged to study and use them to make sound decisions about future schools for their children. Administrators, in turn, would use such data to make decisions about so-called 'outlying' schools, which require dedicated support and turn-around strategies. At the start of the implementation of school league tables in the UK, raw scores of students, aggregated to the school level, were used as comparative performance measures. However, pressure from academic researchers, whose work indicated that differences in results were in the main due to different learner intakes, forced the government to adopt 'value-added' measures, in terms of which the predicting equation includes measures of prior academic achievement as well as other individual attributes that predict performance. In this way, comparisons can be made between learners with similar profiles, but who attend different schools. By calculating average learning gains over each school's learner populations, the ground is prepared for statements about the relative effectiveness of schools.

Generally speaking, the value-added school effects were regarded as better and fairer estimates of schools' contributions, but academic researchers still insisted that uncertainty intervals be published for all estimated school effects. These intervals would enable users of the data to make better

Using school league tables rewards affluent schools because of the clientele they are able to draw, and unfairly punishes poor schools because their learner populations are poor and educationally disadvantaged.

judgements about the relative precision of the school effects and whether school performance was sufficiently different to justify alternative choices. On the whole, most results reveal wide uncertainty intervals, which is indicative of the imprecision with which the effects (and hence overall quality) of schools are measured.

Those who oppose the publication and promotion of school league tables as an accountability and choice tool have put forward an impressive array of statistical evidence and appeals to notions of social equity and justice. The most notable counter-arguments are introduced and explained below.

The causal fallacy

Raudenbush (2004) makes the important point that one cannot establish school quality or claims of effective institutional practice merely by looking at the academic results of schools. In order to make such a claim, researchers must presume an intervention or treatment (managerial quality or teacher excellence) and assume that the effect of this treatment can be separated from other variables that are associated with academic outcomes. In survey research, the best that researchers have been able to do thus far has been to identify those factors that most powerfully predict academic results. In this research, prior academic achievement has emerged as a strong predictive factor, whether it refers to individual learners' earlier cognitive achievements or to a context where learners with similar achievement levels are concentrated in certain schools (compositional effect). In fact, when this variable is controlled for, many of the differences in performance among schools in American and British samples disappear. This suggests that schools that do consistently well have access to the same quality intakes on an annual basis; as such, the results tell us more about their students (and their parents) than about the schools and their practices. In fact, there are complex effects operating in such schools, because, as some research has shown, teachers respond positively to such schooling contexts and learners, thus further implicating factors that are difficult to separate from each other. Theoretically, this process (or, actually, its inverse) operates in poor schools where learner and teacher expectations are lowered, leading to a mediocre academic climate, which, in turn, creates poor results. Using school league tables in such situations rewards affluent schools because of the clientele they are able to draw, and unfairly punishes poor schools because their learner populations are poor and educationally disadvantaged.

Imprecision of measured school effects and instability of school effects over time

This article has already referred to the wide uncertainty intervals that surround estimates of school effects, thus indicating the lack of precision with which school effects have been measured. The reasons are statistically simple to explain. Trying to extract a lot of information from typical sample sizes (class sizes) of about 30 will not add much precision to the measures; yet, this is all we will ever have in trying to make inferences about whether some schools are better than other schools, or whether a particular school's performance falls below the benchmark for schools with similar socio-economic profiles.

Apart from the statistical imprecision with which school effects are measured, research has found relatively low correlations between different cohorts' outcomes. In other words, if we were to compare the results of a group of students now with those of a group that wrote the same tests a few years ago, the trend would be one of weakened correlations between cohort results the further apart the tests of the various cohorts were. This suggests that schooling effects (or performance), controlled for prior academic achievement and other relevant factors, are variable over time. Therefore, when parents need to choose a school for their children, they are likely to rely on present performance data (or ranking in a league table), while the results that ought to matter are an assumed level of performance of schools somewhere in the future (see Goldstein & Leckie 2008; Leckie & Goldstein 2009). Given the low correlations between school effects in different cohorts, school league tables undoubtedly provide misleading and questionable information to parents who base their choice of school on simple league tables.

This point is very vividly illustrated by research that examined school performance in the UK over a three-year period (Thomas et al.1997). The rather low correlation between cohorts who wrote the examinations only two years apart (1990 and 1992) was particularly notable, thus further questioning the usefulness of school ranking tables in assisting parents with choosing the 'right' school for their children (see Table 3.3.1).

> While schools cannot fix the ills of society, this should not lead us to dismiss their importance in countering the effects of poverty and inequality.

Longitudinal data and the introduction of fairer and non-punitive measures

In school effectiveness studies, consensus has emerged on the importance of longitudinal data in studying changes within and among schools. This has reduced the policy importance that is attached to results from cross-sectional surveys; yet, just about all the information that goes into school league table information is derived from one-shot, cross-sectional surveys. Arguably, the most interesting development from studies of change has been the focus placed on the *rate of learning* instead of mean achievement levels. In other words, when learners with similar academic profiles, but enrolled in different schools, are compared, what value does the school contribute to their academic achievement? Raudenbush (2004) calculated the correlations between two measures of school effectiveness, namely achievement levels and the rate of learning (value-added measure) from the same national survey. His strategy was to show how these two measures give different results and how high-poverty and low-poverty schools would be affected by each of the measures. Table 3.3.2 shows the results for Grades 8 and 10 on the science and mathematics results.

For Grade 10 mathematics, for example, ranking schools on mean achievement levels and on the rate of learning produces discordant results, as is manifested in the rather low correlation of 0.46. The same pattern is observed for Grade 8 mathematics, and even the slightly higher correlations for science do not support the view that these two measures capture the same performance dimension. Although value-added measures are far from perfect, they at least ameliorate some of the difficulties associated with mean performance measures. As Raudenbush indicates, if mean performance measures are used, most high-poverty schools would be regarded as failing, but when value-added measures are used (measuring learning gains from one year to the next), rich and poor schools contribute equally to the learning gains of their respective learner populations. These results demolish the myth that more learning happens at affluent schools and support the view of teachers in poor schools that their efforts go unrecognised because of the severe educational and social disadvantages of their learners. How does one reconcile such results with the reality in which rich schools consistently produce better results than schools serving poor learners? Learners have different cognitive entry points, and, therefore, in spite of the gains made by poor learners during high school, these uneven entry levels have a significant bearing on the final, unequal academic outcomes.

Table 3.3.1: Correlations across cohorts in a UK three-year study, 1990–1992

Subject	1990 cohort vs. 1991 cohort	1990 cohort vs. 1992 cohort	1991 cohort vs. 1992 cohort
English	0.86	0.40	0.77
Mathematics	0.59	0.56	0.83
Science	0.52	0.41	0.59
History	0.92	0.71	0.83
English literature	0.84	0.38	0.71
French	0.48	0.38	0.57

Source: Adapted from Thomas et al. (1997: 190)

Table 3.3.2: Correlation between mean achievement levels and value-added measures for Grades 8 and 10 (USA national data)

Subject	Grade 8	Grade 10
Science	0.78	0.67
Mathematics	0.59	0.46

Source: Adapted from Raudenbush (2004: 26)

There are two points worth noting. By focusing on the actual learning that takes place, researchers have posited a fairer and more equitable way of judging what schools do. This also has the effect of portraying teachers at working-class schools for what they are – hard-working professionals in the main, but clearly not magicians. The latest research suggests that in spite of valiant efforts by teachers at poor schools, the results of these schools are consistently lower than those of their richer counterparts. The important lesson we need to learn here is that while schools cannot fix the ills of society, this should not lead us to dismiss their importance in countering the effects of poverty and inequality.

Reliability versus validity in school performance measures

The point has been made above that average achievement levels, as an indicator of school quality, are problematic because such results are greatly affected by the social and economic composition of the school. Yet, it is just such a measure that is used in school league tables. Some consider it a less valid measure of school effectiveness than learning rates because schools have arguably more control over the rate at which learners amass new knowledge (Von Hippel 2009). However, while learning rates are regarded as more valid measures than school achievement levels, the latter are more reliable because they are less variable from one year to the next. Von Hippel makes the point that the gains in reliability that achievement levels have over learning rates are not large enough to offset poor validity. Ultimately, we should be measuring the actual contributions of schools and not promoting measures that blend and confound socio-economic advantage and school practices.

Schools are differentially effective

It is often assumed that a school that does well in one subject should be doing well in all subjects. However, recent research has shown that schools are differentially effective in at least two ways (see Yang & Woodhouse 2001; Lauder et al. 2010):

- Firstly, it is not certain that performance in one subject (or measure) necessarily translates into the same performance in all the school subjects offered. Thus, one-shot measures suffer from bias and may provide an incomplete picture of the effectiveness of schools.
- Secondly, some schools achieve better results for learners who have particular social and economic profiles, and, hence, it becomes problematic to use an omnibus performance measure to judge the overall effectiveness of a school.

Perverse behaviour as a result of the pressures of school league tables

If schools are rewarded for good test results, then there is very little to stop schools from 'engineering' good results. We have already seen ample evidence of this practice in South Africa, where learners routinely are asked to enrol as private candidates, learners are encouraged to take softer subject options, and Grade 11 hopefuls (who are considered risky prospects) are not promoted to Grade 12. This results orientation makes schools less likely to deal with problem cases arising from socio-economic deprivation, thereby further sliding schools into the 'win and produce results at all costs' syndrome. In any society with large socio-economic inequalities, the school league table and testing approach is likely to accentuate performance rifts and produce inequitable schooling outcomes.

Given the arguments for and against school league tables, we need to ask whether the present educational situation in South Africa is ripe for the acceptance and promotion of these blunt instruments. There is, firstly, a growing consensus that our schooling system fails to produce sufficient quality, as demonstrated by our low scores in international standardised tests. Whatever problems one may have with these international and regional instruments, there is ample evidence to vindicate general concerns about the quality of our schooling system. Secondly, there is some appetite for school rankings, as manifested in the Sunday Times' Top 100 School Survey done in 2009 and academic research conducted shortly after the first democratic elections in 1994 (Crouch & Mabogoane 1998). While these attempts at ranking schools can be dismissed as lacking academic rigour, it is symptomatic of the growing clamour to measure and judge the overall performance of schools. Thirdly, the Department of Basic Education (DBE) is under pressure to deliver an improving set of results at both the primary and high-school phases. This situation, coupled with forceful attacks by influential personalities on the perceived role of the South African Democratic Teachers' Union (SADTU) in the quality quagmire, means that the DBE will come under increasing pressure to provide performance information about individual schools. In short, the social and educational situation in the country makes the final push for the adoption of some performance measures in schools easier, and it is only a matter of time before the government enters this problematic and explosive arena. These developments are supported by the government's own attempts at developing a system-wide monitoring and evaluation mechanism, and politicians' acceptance of an outcomes-based framework as per 'delivery agreements' with the president of the Republic of South Africa.

The consequences of adopting school league tables in South Africa are truly frightening. Already, we have significant competition for learners from advantaged backgrounds (academically and economically), and we know how this

Public school league tables, which have funding and reputational consequences, could only result in a race to the bottom in an environment that is already too competitive and deeply unequal.

'creaming-off' process continues to devastate the talent pool at schools in poorer communities. If schools are under pressure to show incremental changes in annual assessments, this fighting over learners will become even more intense, with negative implications for poor schools. Furthermore, talented working-class learners will find it increasingly hard to enter schools that are focused on boosting their middle- and upper-middle-class clientele. None of these scenarios is far-fetched, because we know that South African schools eliminate learners with weaker potential to complete Grade 12, actively encourage risky learners to enter as private candidates, and practice an outdated concept of catchment areas to make sure 'undesirable' learners do not enter the system. Public school league tables, which have funding and reputational consequences, could only result in a race to the bottom in an environment that is already too competitive and deeply unequal.

While voices for quality, performance measurement and so-called accountability have become louder, other viewpoints that focus on equity and redress have been drowned out. If South Africa's unequal and entrenched socio-economic situation is predicted to remain the same in the next 20 years, then the Minister of Basic Education should ask the following questions. Are there examples of schools that consistently achieve high levels of academic performance *and* succeed in blunting or muting the relationship between socio-economic (dis)advantage and academic outcomes? How do we teach, manage, provide resources and create conditions that make this equity-realising scenario the focus of our education interventions in the next 20 years? By adopting these questions, the education authorities could shift the debate decisively away from the need to publish unfair and socially discriminatory school league tables to informing the nation on an annual basis how far we have come in producing greater equity in educational outcomes in our public schools. This strategy must not be promoted as optional; given the miserable recent history of the country, adopting a careful yet firm approach to the management of schooling quality, it should be a primary obligation. Instead of dividing constituencies, as is presently the nature of the discourse on quality, the education authorities should pull out all the stops to cement social cohesion among key role-players. However, they can only do so if they present a compelling vision of quality, equity and redress for the schooling system.

The question, nevertheless, remains whether any information about schools' performance should be provided to the public? We are, after all, at a moment in South Africa where the right of access to information is critical. It would be odd indeed if we were to marshal credible statistical and social justice arguments to block any positive information and feedback to schools. This article does not argue against providing information on the performance of schools, but it does suggest that misleading information – as is contained in school league tables – is just as bad as no information. However, it is entirely defensible to provide performance information to the relevant role-players (school management, parents, teachers and learners) and allow schooling communities and education authorities to develop acceptable improvement plans. Also, it must be understood, as Leckie and Goldstein (2009) argue, that information about how well one school does relative to other schools is but one piece of information, which should not be privileged above other equally valid pieces of information. The authors argue that if comparative school performance information is used with other accountability tools, then the circumscribed use of such information could be quite productive and empowering to schooling stakeholders. Hence, instead of promoting further socio-economic inequality, we should be encouraging improved functioning of school governance structures and better working relationships between district officials and local school governance structures. In instances where local school governance is weak, community stakeholders need to think beyond the confines of one school and adopt effective structures with a wider area/regional import.

What then is the way forward in forging a better connection between providing relevant performance information and affecting academic outcomes in a positive way? In my view, there are four things that the education authorities need to prioritise:

- The government should invest resources in strengthening the existing Education Management Information System (EMIS) and align the data-collection process with the targets agreed between the president, the premiers and their respective education ministers. EMIS units are understaffed, still do not attract professionals with the right skills, and do not understand their role in the quest for better-quality education. Ideally, a senior official should be appointed to head the EMIS unit, with this person reporting directly to the head of the department.
- The DBE should invest in high-quality education panel data or longitudinal studies. These data are critical for establishing the annual gains schools make, determining how the rate of learning is affected by school composition factors, identifying those factors that explain differential

learning rates within and between schools, and identifying schools that consistently achieve high academic outcomes (large intercepts) while moderating the relationship between (dis)advantage and outcomes (flatter slopes). The data should be made available to researchers in academia and civil society to stimulate healthy debate about school effectiveness and to develop context-specific benchmarks that could be used by schools and education authorities.

- The DBE should develop a policy that specifies minimum norms and standards around the kind of information that ought to be published on an annual basis. The purpose of such a document should be to promote access to quality education indicators and to empower all stakeholders to have an informed debate about the state of our public schools.
- Provincial education departments should be encouraged to develop reasonable estimates of schools' effects by using longitudinal data and tracking the average rates of learning over time. These authorities should also use cross-sectional data on average achievement levels and combine this with the longitudinal data estimates. Such comparative school information should be made available to stakeholders, but the education authorities must make it clear that the release of data to stakeholders is intended to inform school improvement plans. Both the DBE and provincial education authorities must analyse and monitor school improvement plans and results, and publish findings in their annual reports. The auditor-general must be requested to do a proper performance audit and to report to Parliament on whether our schools are making progress towards more quality and equitable outcomes.

What this debate shows is that in an attempt to right a wrong (fixing poor-quality education), advocates for quality education could act punitively against high-poverty schools and reward low-poverty schools, on the basis of school rankings in league tables. In doing so, they would make no contribution to solving real equity and educational problems, and merely reinforce an ingrained anti-poor attitude so pervasive in South Africa.

Notes

1. This way of calculating school effects is actually outmoded and relies on what methodologists call the means-on-means regression approach. Today, the standard way of calculating school effects is to take the average of the residuals of all learners in a school and pre-multiply this school residual by a shrinkage factor. The sample size of the school is critical in this calculation – the smaller the sample size, the more the calculation of the school effect relies on the population average (intercept) because the sample contains so little information. In these situations, the raw mean school residual is shrunk to the value of the population average. Conversely, the larger the school sample size, the smaller the shrinkage of the raw mean residual to the population average, which means that the raw mean residual and the calculated school effect would be almost identical.