Bureaucratic accountability in the Education Action Zones of South Africa

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The Education Action Zone programme in Gauteng province, South Africa, has been widely seen as a very successful school improvement initiative, with particular significance as it represents a unique model of top-down, bureaucratic accountability as a vehicle for turning-around dysfunctional secondary schools. In this article I evaluate the impact of the initiative through an analysis of the senior secondary examination results for 1999–2002, in the 70 schools involved in the programme. It was found that the EAZ schools made significant gains in the overall pass rate, university pass rates, number of 'A' symbols, and average mark. The results of comparative analysis confirmed the overall success of the programme. However an alternative explanation raised questions about the mechanisms of improvement by uncovering a relationship between gains in examination results and learner exclusion.

Keywords: education action zone; learner exclusion; school improvement; school intervention programmes

Introduction

In January 2001, the Gauteng Department of Education (GDE) began to celebrate the 'success' of the Education Action Zone programme (EAZ), a flagship school improvement initiative. In the 70 schools in the programme, the average school examination pass rate improved from 15% to over 30% in a single year, and continued to improve in subsequent years. In a field not known for rapid gains, this intervention and the model it used appeared nothing short of miraculous. The extraordinary pattern of improvement continued into the second, third, and fourth years of the programme, when the overall average matriculation pass rate climbed to an astonishing 65%. With the exception of a small number of schools within the initiative, almost all of the institutions far surpassed the original targets set for them.

This success was widely touted in government circles. Within weeks of the programme's initiation, it was pushed into the spotlight. The national Minister of Education at the time applauded the programme: "Gauteng's Education Action Zones have become a model of focused intervention at the secondary schools" (Minister of Education, 20 February 2000). The province's Premier described "the dual approach of developing the teaching skills of educators and taking stern action against those who shirk their responsibilities" as a resounding success (Gauteng Provincial Government, 2000). In 2003, the programme was awarded a silver medal for Service Delivery Innovation from the Gauteng Provincial Government.

Evaluating the claims about the EAZ would be a worthy undertaking in its own right, but in some sense its importance goes far beyond its impact on the schools in which it was implemented. Given its apparent high level of success, its modest costs, and unorthodox approach, a study of the EAZ has the potential to contribute to the growing body of literature that has come to be referred to as 'theory of change'. Emerging out of a set of questions posed in Fleisch (2002), the study had two aims: first, to evaluate the claims of the EAZ intervention itself; and second, to uncover what it could contribute to contemporary school improvement change knowledge.
Background

Whilst the name of the intervention, the Education Action Zone was borrowed from an English education initiative of the mid-1990s, in practice it had few components in common with its English counterpart, and was based on a radically different theory of change. Whilst the English initiative was based on what Power, Whitty, Gewirtz, Halpin and Dickson (2005) described as a 'third way' programme that combined positive discrimination to break the intractable cycle of social and educational disadvantage through associationalism, the South African equivalent had much more in common with America's concerns with pressure and accountability as levers of change in dysfunctional schools (Fuhrman, 1999).

In October 1999, the provincial Minister of Education announced a series of school improvement projects and programmes. Although heavily oriented toward bureaucratic reorganization, a new type of school improvement initiative was given the highest priority. The original plan for Gauteng's EAZ was to develop and implement a new reform model to assist profoundly dysfunctional secondary schools improve their senior secondary examination pass rates. Within the original 20 zones, the Minister proposed the following activities:

- A special tutoring programme for learners;
- Extra monitoring of teacher progress on the official syllabi;
- Training for teachers in high risk subjects;
- Establishment of education-business and education-religious fraternity partnerships;
- Special security arrangements with the police services; and
- Added support to the governing bodies of targeted schools (Jacobs, 1999).

Few of the proposed activities were actually implemented. As the initiative moved from conceptualisation to implementation, the focus narrowed to the implementation of 'special measures' on 70 dysfunctional secondary schools with pass rates below 20%. Unlike EAZ in England, the Gauteng intervention did not change the entire educational programme of the targeted schools or provide substantial additional resources, but rather focused on threats of disciplinary action against teachers, regular surveillance, and intensive monitoring of school compliance with basic bureaucratic rules.

The approach to the intervention reflected a shift in thinking that was occurring within the provincial government, captured in a comment made by the first head of the EAZ programme. Swartz commented:

Although we are moving in the direction of self-managing schools, conditions in South African education, and in Gauteng in particular, conditions are not conducive to us adopting the UK or the French model of EAZ. Firstly, while there may be a high level of community interest in the upliftment of quality and standards at many of our schools, most of our school communities appear to be completely unready or uncommitted to take on such a major task unless direct leadership is provided by the state. Second, none of our dysfunctional schools are able, or willing, to take on a major venture (Swartz, 2001).

The approach was not only to be 'outside-in' but also self-consciously top-down. The core focus was "orderliness, punctuality, and bums on seats" (Gauteng Provincial Legislature, 2000). The programme began with an aggressive drive to monitor learner and teacher attendance on the first day of the school year, followed by a series of meetings with school management, teachers, parents, and learner representatives. The ostensible purpose of these meetings was to explain the purpose of the EAZ programme and to identify 'problems' and possible 'remedies' in the schools. Regular monitoring of late-coming, classroom inspections, and training sessions followed these meetings. During the winter holiday, a matriculation tutoring programme was
put in place and some effort was made to involve local churches, though little appears to have come of these initiatives.

Whilst the EAZ teams began monitoring at the beginning of the 2000 school year, the partnerships and the support programmes took much longer to get off the ground. After months of negotiation, an agreement was signed in July 2000 between the GDE and the religious community to provide comprehensive youth development programmes for young people in targeted dysfunctional schools (The Star, 11 July 2000). Despite the agreement, few such programmes actually happened.

By the end of the first year, two main teachers' unions shared a common perspective on the EAZ strategy. The South African Democratic Teachers Union (SADTU) commented "they've unleashed a crack unit to bully schools". A similar perspective was presented by the main rival union confederation, who described it as "a bullying approach" (Mail & Guardian, 20 November 2000) The strong push towards monitoring and surveillance began to ease up in the third and fourth terms of the first year, this being less a shift of approach than an adjustment to changing conditions in institutions. There was however a very profound shift in the staffing and management of the programme at the end of 2000. The seconded EAZ team members were sent back to their permanent posts and the entire programme was shifted into the new Office of Standards, which had been established in the new departmental organisational structure. Rather than being staffed by seconded officials, the new EAZ units were to be staffed by permanent employees appointed specifically to the task. Given the organisational changes, the early push in 2000 waned and was only revived in any substantial way towards the end of 2002. The first phase of the programme came to an end in December 2002.

What the literature shows
In the past two decades, the international trend in school improvement has been towards bottom-up strategies that incorporate such concepts as learning organisation, whole-school development, school-based reform, site-based management, decentralisation, community and parent participation. (Hopkins, 1998; Fleisch, 2002). Programmes and initiatives that rely on these concepts are coming in for increasing criticism. Some scholars have suggested that only coherent or systemic policies from the centre could drive large-scale reform. (Fuhrman, 1995) They argue that strong instructional guidance driven through aligned curriculum frameworks, teacher development, assessment, and learning support materials, could lead to substantial and sustained improvement in schools (Smith & O'Day, 1995; Muller, 2000). Other critics have begun to argue that the binary between top-down and bottom-up is problematic, and that strategies for change require both (Fullan, 1998; Taylor, 2003).

Along with the re-appraisal of the role of central bureaucratic authority in improving low performing schools is the re-emergence of the debate over the importance of 'pressure' as part of the levers of change. In the United States of America (USA), the emphasis on pressure has taken the form of the 'new accountability' movement, or performance-based accountability (Fuhrman, 2000). In this approach, exemplified by the Kentucky reforms, state agencies set student performance benchmarks for schools, provide additional support to low-performing institutions, and after a specific period of time apply rewards or sanctions according to changes in performance.

What Ball (1998) refers to as 'steering at a distance' has become a powerful model of school improvement in recent years, not only in the USA but increasingly in South Africa as well (Muller, 2000). Running parallel to, and at times overlapping, the performance-based
accountability movement are other 'pressure' approaches that are either more punitive or more focused on core teaching and learning issues. The reconstitution approach, emerging from two decades of experience in San Francisco, remains an option within the mandated repertoire of interventions for low-performing schools, even if the empirical evidence is inconclusive (O'Day, in press; Goldstein, 1998). Whilst still focused on the pressure side of the pressure-support-equation, interventions that stress procedural teaching have gained considerable ground (Fullan, 2000; Elmore & Fuhrman, 2000). Varying considerably in the type of curriculum that is prescribed, some evidence suggests positive outcomes. Datnow (2000) found that highly specified reform designs have positive effects, including providing greater school coherence, more open exchange between teachers, and greater clarity of goals. Similarly, Fullan (2001) reports dramatic improvements as the result of the English National Literacy and Numeracy Strategy.

A focus on pressure

At a theoretical level, a number of new concepts have contributed to an emerging theory of action in school improvement. Barber (2000), for example, has argued that much of the existing school improvement literature contains a fallacy, namely, that changes in beliefs are required before changes in actions can occur. In his theory of action, Barber argues that it is only once teachers experience change over an extended period that they begin to review their beliefs and change their attitudes permanently. For this reason, he argues, it is often necessary to mandate (impose from the outside) the change, implement it thoroughly, and in the process transform the prevailing culture of institutions.

Similarly, Fullan (2001) has suggested that, for low-performing systems, there may be a need to move from more control-oriented approaches for dysfunctional schools, to more open approaches, as schools begin to improve. In his words:

The emphasis that I have placed on the flow of large-scale reform from tighter to looser forms of control (from external to internal commitment) seems more likely to move us forward. In effect the system shifts from control to direction and guidance.

A disaggregated approach requiring different degrees of control or pressure, either in a developmental sequence or targeted at types of institutions, has gained wider acceptance (Slavin, 1998; Hopkins, 1998), a theme recently picked up by Hargreaves (2003). While conceding the overall argument for a differentiated approach, with failing schools requiring prescriptive intervention, Hargreaves warns of the potential for what he refers to as 'professional development apartheid'.

A number of theories have been developed to explain why pressure or accountability is an agent of change in under-performing schools. In the USA, the schools-on-promotion strategies and earlier reconstitution movement were based on the theory that the threat of closure would motivate teachers and refocus organisations around the core business, in order to ensure that the organisation survived. Smith and O'Day (1995) have a more precise formulation in which they note that pressure in the form of standards would act firstly as a self-motivator of change, secondly, so as to ensure that parents using their power as consumers pressure change on institutional level, and finally, as high stake accountability through the actual redeployment of staff and ultimately closure of schools. In the Smith and O'Day (1995) account, they note that pressure and support (by which they infer additional resources) work in tandem. Fuhrman's (1999) theory of accountability begins with the idea that the very act of identification can be a catalyst for change, as it gets the attention of the staff at institutional level. Fuhrman's account
however acknowledges the potential limits of accountability measure. In particular, as a wide range of research has tended to show, accountability mechanisms built around standardized testing can act as 'perverse incentives'. Whilst change is kick-started by high stakes accountability strategy, this change is not what Hopkins (2001) refers to as 'improvement for real'.

Many of the intervention strategies associated with turning around dysfunctional or failing schools centre on the application of rewards and sanctions. Mintrop (2002) identifies two strands:

- Clear performance goals, incentives, and sanctions improve schools by changing teachers' orientations and work effort.
- High accountability, in the form of threats of closure, work if they are applied in conjunction with capacity building.

In other words, sanctions and rewards work on individuals and organisations.

School improvement in South Africa

The South African literature on school improvement is thin, but contains a number of stimulating studies. Grobler (2001) and Harisparsad (2003) have begun to explore the effectiveness of mandated or bureaucratic improvement strategies. Taylor (2001), Muller (2000), and Taylor, Muller and Vinjevold (2003), while not specifically focusing on bureaucratic inspection as a form of pressure, are beginning to argue for the centrality of demand-pull or accountability and a rapprochement between inside-out and outside-in approaches, rather than an exclusive emphasis on supply-push in a theory of action for school improvement.

We still are in the early stages of the research in South Africa and, in particular, we need to know more about the antecedent variables that may explain improvement in student performance in bureaucratic or tight control interventions for low-performing schools. We also need more qualitative data on which to build theories of actions. Such data will enable researchers to understand the internal workings of bureaucratic or mandated reform processes.

Method

In the wider study a mixed method design approach was employed. According to Frechtling (1997), Greene (1989), and Kidder (1987) mixed method research design, which involves a combination of quantitative and qualitative techniques, builds on the strength of each type of data collection and minimizes the weaknesses of any single approach, thus increasing both the reliability and validity.

The results reported in this article, however, were confined to the quantitative component of the research, focusing on an analysis of the senior secondary examination results in the schools in the interventions. In addition to tracking results in the schools over the three years of the interventions 2000, 2001, and 2002, the study broadened out the measure of 'success' to include a set of alternative indicators. To control for wider factors, the quantitative component compared the EAZ schools' performance against a comparator group, as well as the total school population in the province. The final component of the quantitative component was an examination of the relationship between improved performance and possible intervening or compounding factors. To assess the statistical significance of the gain I used both ANCOVA and regression analysis techniques.

Results

The aim of the EAZ programme was to identify dysfunctional schools and provide activities
to turn them into functional schools. Dysfunctional schools were defined as those with extremely low examination pass rates, with a visibility breakdown in school management and governance, and limited classroom teaching. In practice, the primary criterion used in the identification of schools was the school examination pass rate. All public secondary schools that had an examination pass rate of 20% or below, in 1999, were automatically designated as EAZ schools (Figure 2). Sixty-seven public secondary schools automatically qualified. Two additional secondary schools that fell outside this performance boundary were also included in the original group, as was one primary school and one special school. With the exception of one former 'Indian' school and one former 'coloured' school, the remaining schools were all formally registered with the Department of Education and Training. In 2000, one of the secondary schools was formally closed.

Figure 1 Average examination pass rates in the EAZ schools 1996–2003
(Gauteng Department of Education, 1999a; 2000a; 2001a; 2002a; 2003a)

How did the EAZ schools fare over the course of the three years of the intervention and beyond? From pass rates that ranged between 15–24% between 1996 and 1999, Figure 1 clearly shows there had been a substantial and consistent improvement in the overall examination pass rate in the EAZ schools. Figure 3 points to the fact that, by 2003, none of the schools had pass rates below 40%. More remarkable, by 2002, 41 of the original 68 dysfunctional schools had achieved a 50% or better examination pass rate, and seven schools had achieved pass rates above 80%, positioning them amongst the best of the historically disadvantaged schools in the province.

A closer school-by-school analysis revealed the unevenness. Many of the schools in Table A (see Appendix) improved dramatically in the first and the second year, only to slip back in the third year of the intervention. The top-performing school over the three-year period actually
declined in the first year of the programme, and then rocketed up to 94% the following year. While the statistics clearly indicated that the targets set for the intervention were largely achieved and, in some cases, exceeded by a wide margin, for a small but not insignificant group of schools the intervention may have had some short-term effects, albeit the trajectory of improvement was not sustained.

**Multiple indicators**
Given the possibility that examination pass rate could be manipulated, it is necessary to examine a range of indicators to ascertain not only the soundness of the examination pass rate as an indicator of improvement, but also to gauge the extent of improvement in the overall quality of the performance. For this purpose I analysed the examination pass rates, the rates at which learners gained a pass mark that would allow them entry to university. The analysis also included an analysis of the actual number of learners who passed, the number who passed with a university level pass, and the number of 'A' symbols awarded to learners by school. The additional indicators provided a rough proxy of quality of student achievement.
Table 1 presents a comprehensive picture of improvement in the EAZ schools. Not only did the average examination pass rate increase by over 30 percentage points, but the actual number of learners who passed more than doubled from 1 600 to close to 4 000 learners. Whilst the percentage of learners in the EAZ schools who received a university pass was small, at less than 7%, the growth in these numbers was exponential. While a degree of co-linearity exists between the university pass rate and number of "A" symbol awarded, presenting them separately does serve to highlight the improvements in key quality indicators.

Comparative analysis
Whilst the multiple indicators analysis is clearly superior to a single indicator approach, without a rigorous comparative perspective involving matching non-intervention schools, it would be unwise to make claims about the efficiency of the intervention. The comparative analysis in Table 2 provides a striking picture of the dramatic nature of the improvement in the EAZ and comparator group of schools.

Table 2 indicates that the effect of being either an EAZ or Senior Secondary Improvement Programme (SSIP) school on change in percentage pass rate is significant. By virtue of being in the EAZ programme, schools could expect an improvement in the pass rate between 1999 and 2002 to be 35%, compared to other schools. Overall, the $R^2$ value suggests that 53% in the variance in the change in overall improved pass rate in the province is explained by the two interventions.

Aggregate mark
Whilst the pass rate has the advantage of wide popular acceptance as an indicator of both school and system performance, from a statistical perspective it is limited. It does not provide a measure of how well learners actually performed. A school can have 100% pass mark, with the learners passing at the minimum levels or learners all scoring in the top quintile. The average aggregated unadjusted mark provides a better indicator of the level of mastery or of aca-
Table 2  EAZ and comparator group results, 1999–2002

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>t Statistic</th>
</tr>
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<tbody>
<tr>
<td>EAZ schools</td>
<td>35.51760892</td>
<td>18.00320427</td>
</tr>
<tr>
<td>SSIP schools (comparator)</td>
<td>29.17796104</td>
<td>17.77130822</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.53275880</td>
<td></td>
</tr>
</tbody>
</table>

Note: The $t$ statistics are significant to 95%. Comparator group consists of secondary schools with matriculation pass rates <20% and <40%.

demic achievement. This mark is calculated by summing all the marks of all candidates in their top six subjects and dividing by the total number of candidates in either the school or, in this case, in this group of schools. For learners entering on Standard Grade, the highest possible marks would be 1 800. Higher Grade learners can attain a possible total of either 2 200 or 2 300 marks. The percentage mark indicated in Table 3 is not an exact reflection of learner marks expressed as a percentage, but rather is designed as a proxy index. I have divided the student marks by 1 800, rather than the more accurate 1 800, 2 200 or 2 300, depending on the level and subject choice.\(^2\) This has the effect of inflating the percentage. While the percentage should not be used as an accurate representation of the average level of student achievement, it may be useful for comparative purposes to gauge change overtime.

Table 3  Comparative aggregate marks, Gauteng 1999–2002 (Gauteng Department of Education, 1999a, 2000a, 2001a, 2002a)

<table>
<thead>
<tr>
<th>Year</th>
<th>EAZ</th>
<th>%</th>
<th>SSIP</th>
<th>%</th>
<th>Gauteng</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>578</td>
<td>32.1</td>
<td>667</td>
<td>37.1</td>
<td>841</td>
<td>46.7</td>
</tr>
<tr>
<td>2000</td>
<td>596</td>
<td>33.1</td>
<td>699</td>
<td>38.8</td>
<td>862</td>
<td>47.9</td>
</tr>
<tr>
<td>2001</td>
<td>668</td>
<td>37.1</td>
<td>750</td>
<td>41.7</td>
<td>909</td>
<td>50.5</td>
</tr>
<tr>
<td>2002</td>
<td>761</td>
<td>42.3</td>
<td>803</td>
<td>44.6</td>
<td>973</td>
<td>54.1</td>
</tr>
</tbody>
</table>

Table 3 confirms many of the trends identified in the analysis of pass rates, numbers passed, exemption rates, number of exemptions, and "A" symbols. The overall trend in the province as a whole is depicted by a steep upward line, and improvement in all three groups, with the sharpest evident in the EAZ schools. The average aggregate mark climbed from 578 to 761, a 33% improvement between 1999 and 2002. The improvement in the SSIP and the province as a whole were 20.3% and 15.6%, respectively.

Alternative explanations
Provincial officials claim that the dramatic improvement in the overall performance of dysfunctional schools is the direct outcome of the EAZ intervention. The comparative analysis would seem to support this claim, but alternative explanations suggest otherwise.

A number of non-intervention determinants may provide equally credible explanations for the dramatic improvement in the pass rates, these including the effects of (1) the elimination of matriculation repeaters; (2) shift in the pattern of registration away from higher grade to standard grade subjects (Figure 4); (3) a declining percentage of candidates who registered
but failed to write the examinations; and (4) other technical changes associated with either the standard of the examination papers, the marking procedure, or the mark adjustment processes. One of the more compelling alternative explanations emerges from the observation of the inverse relationship between improved pass rates and declining number of candidates.

Figure 4 Changing patterns of examination level

Figure 5 shows that 1999 was a turning point. The EAZ schools recorded the highest number of learners writing the secondary certificate examinations and the lowest pass rate. From 2000 onward, the improved pass rate was associated with declining numbers of examination candidates. By 2003, the trend began to show signs of stabilizing.

Figure 5 Relationship pass rate and number of candidates

What does this say about the improved pass rates in the EAZ schools? Whilst the inverse relationship may be coincidental, it may equally be the significant factor. How would this work? The EAZ schools got better results by carefully selecting only those candidates they
believed had the greatest chance of succeeding, while excluding weaker candidates either from Grade 12 or, more directly, from writing the examinations. A school-by-school analysis would suggest that this explanation may hold for some, but not all, schools. In a significant number of schools, there appears to have been a deliberate policy of learner exclusion in response to the pressures of the EAZ programme. Significant numbers of Grade 11 learners appear to have been either excluded from the school altogether (over-aged learners), or required to repeat Grade 11. In a small cluster of EAZ schools, the declining numbers in Grade 12 reflect longer term declines in school-wide enrolment. The most extreme case is that of Lefi-Efa Secondary in Kwa-Thema, where school enrolment slumped from 722 learners in 1995 to 171 in 2002. Similarly, enrolment at Tladi Secondary dropped from 409 learners to 112 in the same period. Thirty three schools in the EAZ programme had less than half the number of Grade 10–12 learners in 2002, compared to the number in 1995. Another cluster of schools, appeared to have maintained, or even expanded, enrolment simultaneously with high-levels of participation in the matriculation examinations.

Table 4 suggests another interesting insight into performance, suggesting that larger EAZ schools, i.e. those with larger number of learners enrolled overall, tend to perform better. This adds further weight to the 'creaming' hypothesis, as selectivity is only possible in large institutions.

| Table 4 | Relationship between pass rate and school size, EAZ schools 1999–2002 |
|---------|-----------------------------|-----------------------------|
| Coefficients | $t$ Statistic | |
| Intercept | 45.15231 | 17.97408 |
| % change in size | 0.206913 | 2.80701 |
| $R^2$ | 0.109619 | |

For every 1% increase in school size (Grades 10 to 12), there is a 0.2% improvement in a pass rate. In other words, in schools with 20% increase school size, schools would expect a 4% increase in the pass rate.

**Conclusion**

I set out to address two broad objectives. First, given the publicity that the Gauteng EAZ intervention received, it is important to systematically evaluate claims about the effectiveness of this intervention in turning around dysfunctional secondary schools. Following this, given the unique model adopted by the intervention, i.e. bureaucratic accountability, the second objective was to explore the contribution Gauteng EAZ intervention could make to the extant literature on school improvement.

There is no denying that the senior certificate examination results in the EAZ schools improved spectacularly. With a few exceptions, they far exceeded the original improvement targets set for them. In addition to dramatically improved pass rates, the number of learners awarded senior certificates and university endorsements in the EAZ schools grew substantially between 1999 and 2003. Gains are also evident in the number and proportion of "A" symbols awarded to these schools and the considerable increase in the average aggregate marks of individual institutions. Whilst the province's senior certificate results improved overall, the EAZ
schools' gains far exceeded those of the province and another secondary school improvement intervention.

However, do these gains reflect deep and profound organisational culture change — what Hopkins calls 'improvement for real' — in the EAZ schools? What I have shown is that there are credible alternative factors that can account for at least some of the gains, these including the effects of selectivity, as manifest in the declining number of candidates who wrote the examination in the EAZ schools, and the new curriculum choices, as reflected in the shifts in the level at which the learners entered examinations. Whilst not explored here the phenomenon Mintrop (2002) describes as "the picking of the low hanging fruit", i.e. the relative ease of gains for extremely poorly performing schools, may also be a factor. These alternative factors suggest that in at least some of the 'successful' EAZ schools, the gains may have been contrived. On the contribution that an analysis of the EAZ intervention can make to the wider school improvement literature, the jury is still out. To address this, a different method of inquiry is needed. Only school ethnographies or similar qualitative approaches could uncover the generative mechanisms by which bureaucratic accountability triggers either genuine organisational culture change or ersatz responses.

Notes
1. These terms are hangovers from the apartheid classification, referring to people of Asian origin (India as it was before the creation of Pakistan) and mixed race, respectively.
2. This has been made necessary because of the difficulties in identifying the subject combinations that learners have taken, and the problem in the data set with learners who wrote the examinations at Higher Grade, but were condoned passed at Standard Grade.

Acknowledgements
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Appendix

Table A  Matriculation pass rates, Education Action Zone schools 1999–2002 (Gauteng
Department of Education)

<table>
<thead>
<tr>
<th>School</th>
<th>1999</th>
<th>2000</th>
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<td>60.7</td>
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<td>2</td>
<td>8.7</td>
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Author

Brahm Fleisch is Associate Professor in the Division of Education Leadership and Policy Studies at the University of the Witwatersrand. His research focuses on school effectiveness, school improvement, and educational change.