

Policy Brief
March 2011**For richer, for poorer? Can lessons learnt from wealthy schools be applied to help poor schools deliver better results?**

There are large disparities in educational performance amongst South African schools, with historically white schools significantly outperforming historically black (and generally poorer) schools. Indeed, research indicates that South Africa's overall lack of performance - compared internationally and regionally - can mainly be attributed to the under-performance of learners in poor, black schools.

It is tempting to look at the characteristics and practices of well-performing, affluent schools when formulating policies to improve the effectiveness of poor schools. But it is not necessarily true that processes and practices will translate into improved performance as they travel across the socio-economic divide.

A recent study looks at survey data to form a more holistic view of the main factors that may affect school performance. It finds that although some universal truths hold, there are important nuances that should be considered when formulating policies to improve the effectiveness of poorer schools. These findings and resultant policy recommendations are presented below.

The findings presented here are taken from a working paper by Debra Shepherd, based on the 2005/06 Progress in International Reading Literacy Study (PIRLS) dataset which tested learners across 45 international education systems. In South Africa, 14125 Grade 5 students from 385 schools were sampled. The survey recorded learner reading test scores, and also captured extensive data on learners and their family background, teacher level and school-specific information. The original paper can be found at <http://www.ekon.sun.ac.za/wpapers/2011/wp052011>

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POLICY ISSUES

The 2006 Education Law Amendment Act introduced a framework for the ranking of schools according to socio-economic status, using rates of income, unemployment and illiteracy in school catchment areas. This was done in recognition of the large socio-economic differences that continue to exist in South Africa's two-tier education system, the aim being to channel additional funds towards lower-ranking (poorer) schools. At the same time, the "no-fees schools policy" encourages access to education in the poorest of school catchment areas.

Previous studies have shown that a school's *overall* socio-economic status (SES) has a greater impact on learner performance than learners' household SES¹. But it is unlikely that the constraints presented by a school's SES profile can be overcome through budget allocations alone, because both a school's SES and performance are affected by a range of factors over and above its level of income.

This doesn't mean that allocating additional funds to poorer schools isn't important. But it does raise questions about how the money should be spent. What should the priorities be? Better teacher qualifications? Improved school infrastructure? More textbooks? Or professional development for teachers and principals to help them make more effective use of the resources that they already have?

¹Spaull, N. 2011. "A preliminary analysis of SACMEQ III". Stellenbosch Economics Working Paper 11/2011, Stellenbosch University: Department of Economics

In setting these priorities, are there any lessons to be learnt from more affluent schools? What are the practices and processes that make them more effective and efficient, and can they be applied to improve the performance of poorer schools?

THE RESEARCH QUESTIONS

The PIRLS (2005/6) dataset is unique in that it allowed schools to choose the reading test language. Shepherd’s study could therefore separate African language schools from English/Afrikaans schools, providing a (crude) segregation between formerly black schools on the one hand, and formerly white, Indian and coloured schools on the other.

The study references international literature to identify four kinds of input that may affect student outcomes:

- Supporting inputs (such as parent and community support and access to learning materials)
- School climate (such as order, discipline, teacher attitudes and an organised curriculum)
- Teaching/Learning processes (such as the amount of learning time, frequent homework and assessment)
- Enabling conditions (such as effective leadership and capable teachers)

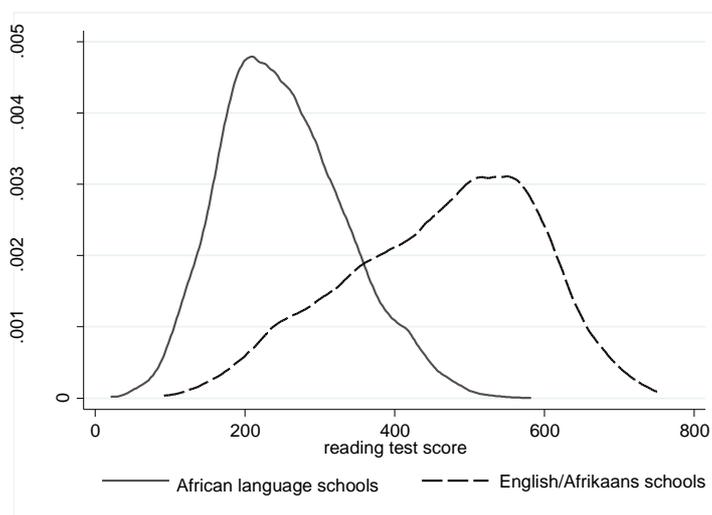
The PIRLS dataset provided rich information relating to each of the above themes, and the research was aimed at analysing how a range of variables affected learner test scores. The analysis was done separately for African-language and English/Afrikaans schools. This enables a useful comparison to help explain whether the same performance dynamics apply to both rich and poor schools.

KEY FINDINGS

1. Test performance by ex-school department

Figure 1 shows the difference in performance between the two school “systems”, with learners in African language schools scoring 250 on average in the reading test, whilst English/Afrikaans school learners averaged 473. Although the average for English/Afrikaans schools is much higher, there is a wider distribution of results compared to African language schools.

Figure 1: Reading test score distribution by school type



2. Classroom practices and homework frequency

Previous research has suggested that different classroom practices may lead to effective outcomes in low-SES schools, than is the case in high-SES schools.

The PIRLS data analysis sketches a similar reality. Amongst African language schools, regular classroom exercises in the form of worksheets and group discussions, as well as diagnostic testing, were all found to have positive and significant impacts on average student reading scores. In contrast, higher-order reading aids and the use of books with chapters are found to be more effective in English/Afrikaans schools.

Teachers from English/Afrikaans schools are more likely to give homework that is expected to take less than 30 minutes to complete. The short average completion time may indicate that homework is (at least sometimes) given for reasons that are not purely educational - i.e. to satisfy parents' expectations. Nevertheless, frequent completion of such homework as reported by the teacher is shown to have a positive impact on average reader test scores. The same homework impact is not found in the case of African language schools (although individual learners who spend more than an hour on reading homework of their own accord do perform better).

3. Extended learning time

The provision of extended learning time is not a common practice amongst African language schools, with less than 40% of schools providing this facility. The analysis shows, however, that if a school does provide such opportunities, and if more than 75% of learners take part in it, then there is a significant, positive impact on average learner test performance. The same trend was not identified in the case of English/Afrikaans schools.

4. Parental involvement

Various forms of parental involvement were shown to have an impact on both African language and English/Afrikaans school performance.

At household level, the following factors were shown to have a positive effect on reading scores: Help with homework, parents' level of education, regular joint reading activities at home and parent-child communication in the language that the reading test was taken.

But parental involvement can be important outside of the household too. The analysis took into account two kinds of involvement: First, opportunities created by the school for parents to be involved (supply side) and second, parents' willingness to become involved (demand side). A school was deemed to embody high involvement if more than two formal parent conferences were organised annually, and if parents volunteered regularly to help in the classroom or with some other school activity.

Such levels of involvement were shown to have a significant impact on performance in English/Afrikaans schools, but the same significance was not found on the part of African language schools. It seems that a school's socio-economic status may affect the nature, quality and impact of parent involvement. A previous study by Crozier (1999) found that parents in low SES schools perceived teachers to be "superior and distant", which discouraged pro-active parent-teacher partnerships. If parents doubt their own ability to make useful contributions they are less likely to become involved, and when they do their level of involvement may not be of sufficient depth or quality. This may explain the lack of impact parental involvement has in the case of lower SES schools.

5. Comparison with previous findings

The analysis shows that teacher qualifications have a significant impact on performance in English/Afrikaans schools, but not in the case of African language schools. This is broadly in line with previous findings by Nic Spaull². It doesn't imply, however, that teacher quality isn't important, but rather that effective teachers are perhaps defined by skills and abilities that aren't dependent on their formal academic qualifications.

²Spaull, N. 2011. "A preliminary analysis of SACMEQ III". Stellenbosch Economics Working Paper 11/2011, Stellenbosch University: Department of Economics

DATA ISSUES

A school was dropped from the English/Afrikaans group if more than 65% of students did not speak the test language regularly at home, and more than 30% of learners lacked access to basic utilities. A school satisfying these criteria was probably an African language school that opted for the English test. There is a risk, however, that these schools were deemed as African language because they are “poor”, but that they really are English, Afrikaans or Indian schools. Such an elimination of relevant poor schools from the language group would lead to an over-estimation of test score impacts amongst the English/Afrikaans group, because this sample would be restricted to relatively wealthy schools.

Large numbers of data were missing from the survey. Simply eliminating learners with missing data from the analysis could bias the results because weaker learners are more likely to leave answers blank. Various statistical techniques were therefore used to compensate for the missing data so as to enable representative coverage including more learners.

POLICY IMPLICATIONS

▪ Classroom practices and homework

The varying impact of classroom activities vs. homework between African language and English/Afrikaans schools is illuminating. It seems that regularly prescribed homework has a much larger impact in the case of the latter, whilst learners in African schools benefit more from a focus on classroom reading and assessment activities.

This doesn't imply that homework isn't important, but rather that schools from a low-SES background need to provide additional opportunities for learners to develop their skills in school time, since they may not benefit from sufficient support or ideal conditions at home to help them get the full benefits of homework.

▪ Extended learning time

For reasons that are probably similar to the ones mentioned above, learners from African language schools benefit disproportionately from extended school learning time. Policies aimed at providing schools with the ability to fund such initiatives should therefore have a significant impact.

▪ Parental involvement

Forcing African language schools to replicate the frequency and structure of arrangements found at English/Afrikaans schools will not necessarily have the desired effect, because parents from a low-SES background may face other barriers (real and perceived) that prevent them from making useful contributions. Developing leadership on the part of school principals is vital, since their ability to encourage parents to become involved and to help stimulate and strengthen such involvement are vital.

The important point is that all of these determinants of school effectiveness appear to be highly context dependent, so centralised micro-management of targets will probably not be effective. Poor schools don't need much money or equipment to get learners to read out loud in class. What they do need, however, is for their teachers to understand that such practices disproportionately benefit learners from poor households.

From a policy perspective, the professional development of teachers in general, and principals specifically, is vital. So is ensuring that principals and teachers have access to research results such as the ones presented here. Great schools perform well for reasons that go way beyond effective curriculum coverage, great facilities or money: They are able to understand, choose, develop and evaluate relevant, effective practices within the context of their own school's status and culture.

FURTHER QUESTIONS

Comments and questions are welcomed, and can be directed to the author of the paper at debrashepherd@sun.ac.za