



Standardised learner assessments in 'affordable' independent schools in South Africa



THE ROLE OF SCHOLASTIC ASSESSMENTS

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The state of the South African education system is widely perceived as one of the country's biggest challenges. The system has failed to provide the vast majority of young people and their families with quality education, while the schooling system suffers from severe inequality, high drop-out rates and very low learner outcomes (CDE, 2015; van der Berg et al, 2017). The need to turn around this dire situation has been a national priority for more than two decades. Unfortunately, the significant investment by government and the private sector

has not produced a notable positive impact on learner achievement or inequality (Taylor & Shindler, 2016).

A result of the serious deficiencies in the public schooling system has been the rapid growth of private schools (officially called independent schools). The size of the sector has increased in response to both excess (unmet) demand for education above what the state can provide and differentiated demand for alternative types and quality of education to that provided by the state (James, 1991). In South Africa, both types of demand exist: parents want more, better and different education for their children. The lack of public schools in certain areas such as informal settlements, rural areas, inner cities and rapidly expanding suburban areas and dissatisfaction with the quality of education in the public system, coupled with the perception that private schools offer a higher quality education and therefore, better life chances for children, are key drivers of private schooling. There are also many parents who prefer the values-based education provided by faith-based schools or alternative types of education, such as that offered by the Montessori methodology, international curricula or online schooling, none of which the state system can provide. »

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JET Bulletin—The purpose of the *JET BULLETIN* is to share some of the knowledge and insights that are gained through various multifaceted projects in which JET is involved. JET is very active in education development and evaluation, and we see a wide range of new learnings emerging which we believe would be of interest and value to other stakeholders in the sector and to education and training more broadly. We trust you will find the content of this edition of value. Going forward, each edition will share new ideas and new learnings around a chosen topical focus. The *JET BULLETIN* will be distributed primarily online, with a limited number of copies available in print.



According to the Department of Basic Education (DBE), in 2016, there were 1 855 registered independent schools, constituting 7.3% of all 25 574 South African schools (DBE, 2016). The independent school enrolment of 590 352 learners was 4.6% of all 12.9m learners. Although the sector is small, it has more than doubled from about a quarter of a million learners in 2000.¹ By contrast, public school enrolment has increased slowly, by 2,3% between 2000 and 2012 (Hofmeyr, 2014).

A study by The Centre for Development and Enterprise (CDE) (2015) revealed a major demographic shift in the composition of the independent school sector, from mainly white learners in high-fee schools to mainly black learners in low- and middle-fee schools. This was confirmed by a 2017 study which analysed the DBE's Education Management Information System (EMIS) data (van der Berg et al, 2017).

In South Africa, as in most countries, the debate about private education is characterised by too much heat and too little light: At a seminar held at JET in June 2017, Hofmeyr pointed out that in the absence of comprehensive information, discussion of the topic is often characterised by generalisations and misconceptions and is influenced by politics and ideology rather than facts. Hofmeyr went on to say, "The false dichotomy about public versus private provision is not helpful and ... [w]hat South Africa needs is to find the right combination of public and private schooling which ensures that growing numbers of children receive a good education as quickly as possible" (Hofmeyr, 2017).

The key question is "affordable for whom?" The CDE, which has undertaken significant research on independent schools, has offered a guide to the answer. It has developed a categorisation of independent schools based on the national average of the *provincial average estimated (expenditure) per learner* (PAEPL) which government uses to calculate the state subsidy for qualifying, not-for-profit schools serving disadvantaged communities. In 2017, the national average PAEPL was roughly R15 000 a year. Independent schools charging fees between R15 000 and R7 500 per annum could qualify for a 45% subsidy, and if their fees were lower than R7 500, for a 60% subsidy. CDE would classify schools charging less than the PAEPL (R15 000) as low-fee, affordable by low-income earners in disadvantaged communities. Many of these are stand-alone not-for profit schools but there are some chains such as the Vuleka, Leap, Two Oceans and BASA schools.

Van Der Berg et al (2017) have argued that in the context of a middle-income developing country, these fees are too high to justify that categorisation (see the adjacent table). Indeed, compared to low-fee schools in other developing countries,

1 It should be noted that the official figures are an undercount of the sector because many provincial databases are not comprehensive or up to date (Motala & Dieltiens 2008: 50; Hofmeyr 2014: 265)

the fees charged by low-fee schools in South Africa are high (CDE, 2015).²

School fees ranging from about R15 000 to R38 000 (the fee limit for a state subsidy) would be affordable by the lower middle-class. Examples of such schools are the Spark, Prestige and Meridian schools. Those charging fees between R38 000 and R70 000 could be regarded as mid-fee schools and include the ADvTECH Academies and the Curro, Future Nations and Nova Pioneer schools; these would be affordable by the middle- and upper middle-class. Schools charging more than R70 000 per annum could be regarded as high-fee schools; examples include the Crawford and Reddam schools, and most of the historic, single-sex, independent schools around the country.

To obtain information about independent school fees is not simple because none of the chains provides this information on their websites. Fees are only made known to parents when they fill in an application form. Consequently, the only way a researcher can obtain information on fees is by phoning the school operator or a range of individual schools in a chain (the fees differ somewhat from site to site). The following table provides the 2018 school fees in a range of affordable independent schools obtained through phone calls.

School	Children per class	Annual fees 2018 (Grades R+)
Spark	32	R21 000
PLG Schools	20	R23-R46 000
Prestige	35	R21-R26 000
Nova Pioneer	30 (2 teachers)	R28-R43 000
ADvTECH Academies	Around 25	R40 870 +
ADvTECH Crawford	Around 25	R84 870 +
Curro Academies	35	R24-R50 000
Curro Schools	25	R69 540
Meridian Schools	35	R21-R26 000
BASA	30-40	R11-R18,360
Royals	28	R15-R22,770
Public schools (fee charging)	35-40	R20-R47 000

Notes:

- In Spark schools, the fees relate only to primary schools and the class size is a rough guide because the pupils are almost never taught as one group.
- There are often additional costs apart from the fees.
- Public school fees are seen to range from low (R20 000) to high (R47 000). This makes independent schools relatively affordable compared to some of the best public schools.

2 See CDE (2015): By international standards, South Africa's low-fee schools are expensive. In India, "budget" private schools charge annual fees as low as R2 000 and less. In Kenya, the chain of Bridge schools charges R360 a year. The main reason for the higher fees of South African low-fee schools is the high standards required for registration and accreditation as an independent school, involving substantial start-up costs and ongoing significant compliance and quality assurance costs of time, the skills required and direct outlays of money.



In recent years, in both stand-alone, not-for-profit schools and chains of for-profit schools, the highest growth rate has been in mid- and low-fee independent schools; this is a clear indication that South African parents want more affordable fees than those charged by the high-fee schools. But are parents getting value for money? How good is the quality of education in affordable, independent schools? Internationally, the impact of low-fee private schools has not been conclusively established, although as van der Berg et al (2017: 8) note, “most studies have found at least some positive effect of attending a private school, though the effect sometimes differs by subject or location”.

In South Africa, there is similarly a dearth of research on the quality of affordable independent schools and government does not disaggregate and publish the pass rates of independent schools in national assessments at Grade 3, 6, and 9 levels, nor in the Grade 12 National Senior Certificate (NSC) examinations. Van Der Berg et al’s research (2017) attempted to address this question by comparing school performance in public and low-fee independent schools in the Western Cape, Gauteng and South Africa as a whole. The aim was to see whether low-fee independent schools outperform public schools with similar school fees and resources.

They found that independent primary schools in all three geographical regions are able to use resources more efficiently and translate them into better performance. However, when they compared schools in similar fee brackets, the findings were mixed and varied by geographical area. They concluded that while in Gauteng lower-fee independent schools provide parents with “better value for money”, in the Western Cape “parents do not get as much value for money in independent as in public schools” (Van der Berg et al, 2017: 25).³ In addition, they assert that far more research is needed in South Africa to more fully investigate the quality of education in lower-fee independent schools.

Nonetheless, the contribution of the independent schools to South African education is significant: they advance the right to basic education, relieve the pressure of access faced by the public sector, save the government money, offer parents’ choice and access to quality education and provide an environment for innovation that can inform all schools.

Taking cognisance of these developments, JET Education Services (JET), in collaboration with four school operators⁴ and Old Mutual Alternative Investments’ Schools Fund, has been involved in the assessment of educational quality in affordable independent schools using standardised

assessments.⁵ The overall aim has been to improve educational quality and accountability in these schools, and JET has been providing technical expertise in relation to: setting tests aligned to the *Curriculum and Assessment Policy Statements (CAPS)* (DBE, 2011); giving feedback to test developers on the functioning of the standardised tests; analysing a sample of results from each school; and contributing to the setting of agreed annual educational targets for Grades 3, 6 and 9 as well as the NSC, where applicable. The approach of measuring annual results against agreed targets is not without its challenges, and one of the main difficulties has been the comparability of tests across years without having secure, anchor test items which would allow for the equating of the tests across years. In order to overcome this hurdle, several checks and balances have been put in place. To name a few: ensuring that test specifications and frameworks remain constant across years; conducting rigorous training and oversight of test administration at school level by school operators; performing statistical analysis of test functioning; and most importantly, using test results as only one consideration during the setting of educational targets. The teachers, school management and school operators add their voices to the process of target-setting by providing insights into a particular school’s context, their particular challenges and successes and their educational approach, all of which are considered when educational targets are agreed. This has been a learning curve for all involved. As an important by-product, a more developmental use of assessment has also begun, with some school operators using a more detailed analysis of the assessment data to inform their teaching practices.

... independent primary schools in all three geographical regions are able to use resources more efficiently ...

A range of views and various aspects of JET’s collaboration with some of the key partners is reflected in the collection of short articles included in this Bulletin. The first article, by Roelien Herholdt of JET, reflects on the diagnostic value of assessment being used in this context, specifically on how a finer-grained analysis of learners’ results can improve teachers’ content and pedagogical content knowledge. Lala Steyn then provides an impact perspective in which she focuses on an acceptable commercial rate of return that can be measured through assessing education quality, while following a strong developmental approach that allows schools to participate in setting the annual targets for student achievement. The next two contributions are from two affordable school operators. In the

3 It must be noted, however, that their research in the Western Cape was based on a very small sample of independent schools.

4 The Royals Group and Prestige, BASA and Meridian Schools.

5 “A standardized test is any form of test that (1) requires all test takers to answer the same questions, or a selection of questions from a common bank of questions, in the same way, and that (2) is scored in a ‘standard’ or consistent manner, which makes it possible to compare the relative performance of individual students or groups of students. While different types of tests and assessments may be ‘standardized’ in this way, the term is primarily associated with large-scale tests administered to large populations of students” (Great Schools Partnership, n.d.) »



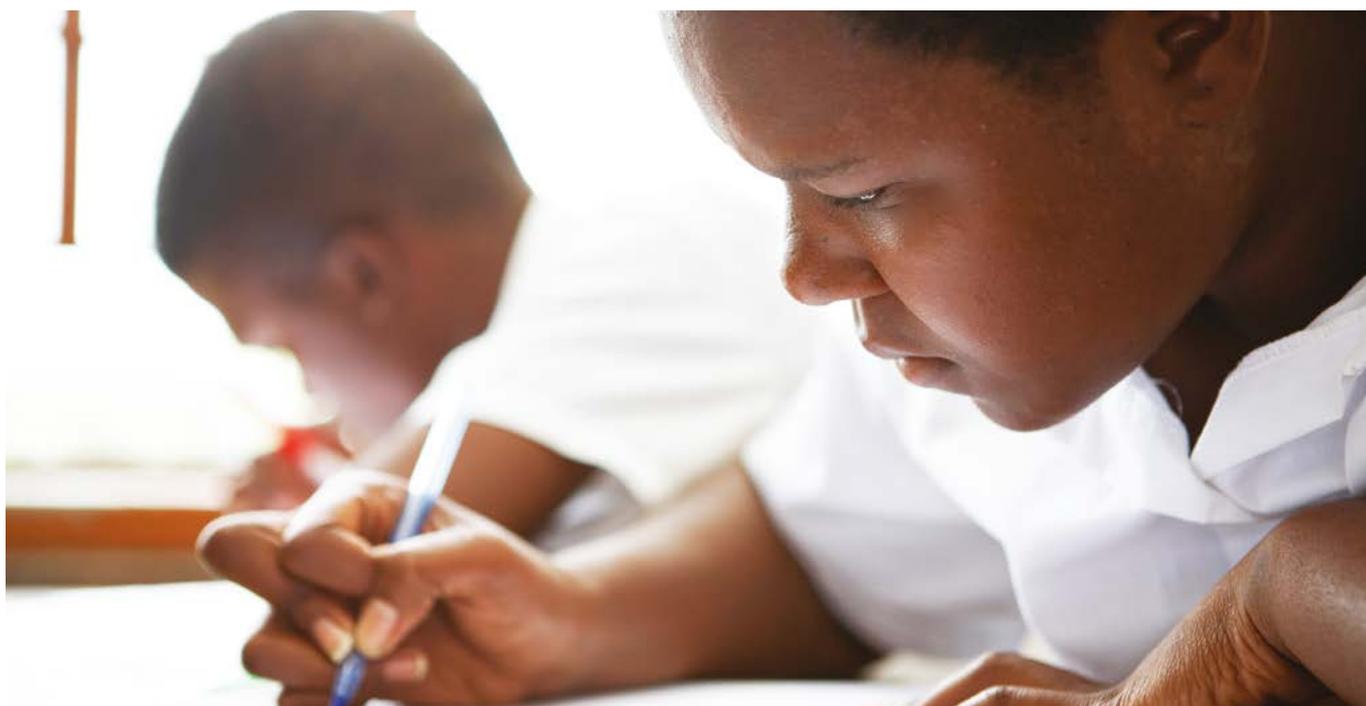
first, Alta Greef from Curro, which also operates the Meridian Schools, reflects on the assessments that Curro has developed. Mampho Langa provides the final contribution, this time from the newly established Future Nation Schools (FNS). Mampho's involvement in the sector precedes her role at FNS and so she provides a very useful account from the view of a leader and practitioner working within the affordable school context.

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As JET we are very aware of the political and ideological tensions associated with the development of affordable independent schools. Our view is that a quality public school system is the priority for South Africa. Without this, the majority of our learners would not have access to the quality schooling they deserve. In this respect, JET works extensively with many partners, including the DBE, teacher unions (specifically the South African Democratic Teachers Union [SADTU]), civil society groups, NGOs and also increasingly with the private sector. This Bulletin is not an endorsement of wholesale privatisation of education in South Africa – it is rather a direct engagement with a phenomenon that is gaining traction in our country – the growth of affordable independent schools. We cannot ignore this fact. And, as a country, we need to be able to measure the quality of learner achievement and the improvement in learning outcomes in all our schools, including affordable independent schools, in an accountable, credible and scientific manner.

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AN OPPORTUNITY TO IMPROVE THE QUALITY OF TEACHING THROUGH ASSESSMENT IN AFFORDABLE INDEPENDENT SCHOOLS

Error analysis, importantly, does not just involve analysis of learners' correct, partially correct and incorrect steps towards finding a solution; it also implies the study of best practices for remediation.

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The Centre for Development and Enterprise (CDE) highlights in their 2015 report that affordable-fee or affordable independent schools are caught in a perpetual struggle between financial viability and providing quality education. The report concludes that research, evaluation of programmes and quality assessment are levers of change that can affect the estimated one quarter of a million learners enrolled in low-fee independent schools. In this article, one such lever, the use of assessment as a rich source of formative information to improve education, is discussed.

Government regulations governing independent schools, including the conditions for registration and the requirements to qualify for a subsidy, are accountability measures which contribute to the quality of instruction provided. Other accountability measures include, but are not limited to, teachers having to be registered with the South African Council of Educators (SACE) and the accreditation of the school curriculum by the Council for Quality Assurance in General and Further Education and Training (Umalusi). In addition, provincial departments of education (PEDs) also use results of common task assessments – exam papers developed by the PEDs or the Department of Basic Education (DBE) as well as the National Senior Certificate (NSC) – to compare the quality of learner achievement in independent schools with the average provincial pass rates. The fallacy of using common task assessment or NSC achievement in the province as a benchmark for quality education is clear: the provincial pass rate should not be compared to that of a poorly performing district in that province, and provincial pass rates differ widely. The learner pass rate that a low-fee, independent school with disadvantaged learners has to achieve in Gauteng or the Western Cape is vastly different to that in the Eastern Cape or KwaZulu-Natal. Neither does this comparison consider that the learners attending affordable independent schools may differ in other ways from learners attending public schools.

In the face of the limitations of the current quality assessments, funders and donors supporting affordable, independent schools develop their own means of maintaining and improving the quality of education in the schools, for example employing an academic head in each school. The role of the academic head (also referred to as the academic deputy principal) is to monitor,

oversee and ensure that quality instruction and assessment take place. The academic head is often also responsible for introducing innovative new programmes (e.g. the use of tablets) to supplement regular teaching and assessment practices.

While government assessments such as the common tasks and NSC exams are used as accountability measures, they can also be used to obtain rich, formative information which can be utilised to improve the correct targeting of interventions and raise the overall quality of instruction. However, regrettably, such diagnostic or formative use of assessment data often remains on the level that Ketterlin-Geller and Yovanoff (2009) term “skills analysis”, that is, the analysis of learners' responses to sets of questions to determine their mastery of specific topics, skills or cognitive levels. In this context, learner responses to individual questions are often seen as less important than group averages.

... funders and donors develop their own means of maintaining and improving the quality of education in the schools ...

Error analysis or the study of errors in learners' work with a view to finding explanations for learners' reasoning errors is a useful tool that can be used to analyse assessment data beyond the topic, skills or cognitive levels. It can be traced back to the work of Radatz in 1979. Granted, not all errors can be attributed to reasoning faults; some are simply careless errors (Yang, Sherman & Murdick, 2011) identified as “slips” (Olivier, 1996), which can easily be corrected if the faulty process is pointed out to the learner. Slips are random errors in declarative or procedural knowledge and do not indicate systematic misconceptions or conceptual problems. Error analysis, on the other hand, is concerned with the pervasive errors which learners make due to their lack of conceptual or procedural understanding. Someone who makes this type of error believes that what has been done is correct – thus indicating faulty reasoning. Such errors (or “bugs”) are systematic (Allsopp, Kuger & Lovitt, 2007) and persistent and occur across a range of school contexts (Nesher, 1987).

Error analysis, importantly, does not just involve analysis of learners' correct, partially correct and incorrect steps towards finding a solution; it also implies the study of best practices for



remediation. This requires the teacher to have a good understanding of the common content knowledge, specialised content knowledge and pedagogical content knowledge. An argument can thus be made that the ability of teachers to remediate common learner errors and misconceptions underlies Shulman's definition of pedagogical content knowledge.¹ Furthermore, the ability of a teacher to anticipate learner errors and misconceptions could arguably also be seen as part of pedagogical content knowledge.

From the above, it is clear that error analysis is interwoven with teachers' content and pedagogical content knowledge as well as teachers' knowledge of cognition and the conceptual development of learners. Using error analysis to understand some of the thinking of learners can assist teachers to adjust their pedagogy as well as classroom and assessment practices, which may ultimately lead to improvement in learner achievement (Franke & Kazemi, 2001). The positive effects on learner achievement of an integrative teaching approach which made use of error analysis have, in fact, been documented by Borasi (1994).

Unfortunately, however, research has shown that teachers are often not equipped to design and implement teaching interventions based on the errors made by learners (Riccomini, 2005). Russell and Masters (2009) note in their paper presented at the annual meeting of the American Education Research Association that during error analysis, teachers may neglect the conceptual understanding of learners in favour of procedural correction. This highlights the need for the establishment of professional learning communities among independent schools² as well as the role of the operating company and academic heads in providing teachers with in-service training. Chains of independent schools offer a unique opportunity to establish professional learning communities and to foster cooperation across schools.

This paper has argued that a finer analysis of learner test results, that is, error analysis, could improve teachers' content and pedagogical content knowledge as well as teachers' understanding of learners' cognition and concept development. Teachers may even learn to identify which items in their assessments and tests yield better data about learners' difficulties, and this could lead to improvements in teachers' assessment practices.

Systemic intervention programmes should be available to assist teachers to adapt their teaching to address the common errors in their learners' work and set goals for the achievement of their learners on an annual basis.

1 "A second kind of content knowledge is pedagogical knowledge, which goes beyond knowledge of subject matter per se to the dimension of subject matter knowledge for teaching" (Shulman, 1986: 9)

2 Professional learning communities have been established by a number of independent schools groups: for example, the South African Extraordinary Schools Coalition (SAESC), and a range of independent primary schools in Johannesburg that collaborate in developing benchmark tests and examinations for the various grades.

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MAKING AN IMPACT A PRIVATE-SECTOR SOLUTION TO SOUTH AFRICAN EDUCATION

The affordable independent schools sector in South Africa is tackling the education crisis facing our nation by creating schools in which youngsters can learn effectively.

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“In the beginning, during my university days I was drowning in work. My emotions were up and down and I had a lot of frustrations. I am now well on my way to making the transition from a school learner to a university student. A change from a shaky to a solid, confident and excellent student is emerging,” said Karabo Phenya in May 2017.

Karabo matriculated from Princess Park College in Pretoria in 2015 and started studying a B.Sc in Construction Studies at the University of the Witwatersrand in 2018. As he attests, the transition from school learner to university student is a rocky road, but he would have had no chance of reaching that road without the opportunity to access quality education at school.

Princess Park College is one of the independent schools managed by the Royals Group which is a partner of the Schools and Education Investment Impact Fund of South Africa (Schools Fund). The Schools Fund is managed by Old Mutual Alternative Investments and has invested in eight school operators. In 2018, across the country, there are 165 500 learners and 1 250 staff in the 34 schools managed by these school operators.

The R1.4 billion Schools Fund, the first significant impact fund in the education sector, was launched in 2012 by the Government Employees Pension Fund and its asset manager, the Public Investment Corporation (PIC), and Old Mutual. The Schools Fund is an innovative initiative that makes use of pension finance, in the form of loans to the school operators, to create additional quality schooling opportunities for learners at affordable independent schools. These schools must provide quality education, and the school fees are capped so as to increase affordability for parents.

The Schools Fund has partnered with BASA, Royals, Meridian (managed by Curro), Prestige, EdInvest, Two Oceans, Blue Hills and St Christopher’s, which provide quality education, and exhibit sound financial management and good governance practices. These school operators have also shown the ability

and desire to expand the scale of their operations in order to increase their impact on a greater number of learners. Working side by side with its partners, the Schools Fund ultimately hopes to reach 50 000 learners by 2027.

The key attribute that impact investing in education offers is aligning the creation of economic value and social value. Through the mobilisation of long-term commitment of capital to education, the private sector is investing in the future, given that returns will only be seen in ten to 15 years’ time. Parents, learners, teachers, the business community and investors become excited about this approach because they see the possibilities, and this generates the motivation that helps to drive change. The scale of the investment can be huge, with the possibility of extending the impact to a large numbers of learners. Moreover, if impact investing, corporate social investment spend and public sector resourcing become aligned, this could make a really significant contribution to addressing the crisis in South African education.

So how does impact investment work? The Schools Fund and other investors invest in affordable independent schools by providing a loan/equity to a ring-fenced company (i.e. school operator) that owns the school property and that has to repay the loan. The schools are operated by non-profit or for-profit companies that employ the teaching staff. A management company provides services (such as financial management), to the schools and is responsible for good governance. In cases of underperformance, these companies and key people involved are held accountable, and action is taken to address the needs of the child, the parent, the staff, the investor and the broader public interest, of which the state is the custodian.

Parents, learners, teachers, the business community and investors become excited about this approach because they see the possibilities

Impact investing in the education sector is presently changing the face of the independent schooling landscape in South Africa in the following ways:

- New schools are being provided for learners where there is a need, decreasing the burden on the state.
- Existing small-scale black school operators are scaling up from one school to many – for example the BASA schools in Soweto and Prestige in Gauteng.
- Young, skilled, South African entrepreneurs, who seek to tap into private-sector levers and efficiencies while delivering a social return, have opened quality schools with affordable fees in the past few years – for example the African Schools of Excellence, Nova Pioneer Academies and Spark Schools.
- Private equity investment has grown significantly, albeit mainly in the middle to upper end of the market, for example, in the expansion of Curro, AdvTech and Reddam. »



- In addition to the Schools Fund, the first significant impact fund in the education sector, other impact investments have been made, for example, the Pearson Affordable Learning Fund has invested in South Africa and high net-worth individuals are providing backing to new initiatives.
- Many school operators have a fresh approach to how quality education should be provided, and their innovations may well result in technology-based breakthroughs that can be used throughout the schooling sector.

The measure of the success of this kind of investing is both the quality of education provided and the commercial return. The state plays an important role as the regulator and its consent is required for a myriad of matters that impact a school, from the approval of building plans, to the approval of a registration application and the allocation of a subsidy.

To succeed, the Schools Fund needs to meet both the commercial return and quality education requirements. While there are various standard measures that the private sector uses to assess commercial value, assessing education quality is a learning curve. At present the Fund has adopted an approach that compares annual test results against agreed targets, with the process guided by independent education experts such as JET Education Services.

On an annual basis, improvement in the final NSC (matric) exams is measured. For example, in 2017 the schools across the Schools Fund's portfolio delivered an average 92% matric pass rate and a 42.8% Bachelor pass rate, which allows access

to universities. Compared to the national results, these are very good. However, if these average results (across a range of very different schools) decline or increase next year, it does not necessarily mean that the quality has declined or increased across all schools, or explain why this has happened. A deeper analysis is needed where results across grades, over a number of years (children go to school for 12 years) are compared, combined with a detailed understanding of each school and its context.

To succeed, the Schools Fund needs to meet both the commercial return and quality education requirements

An annual measurement of the improvement or decline in numeracy and literacy at Grade 3, 6 and 9 levels, based on results from a standardised test, is being implemented. The standardised test approach is similar to what government was attempting with its Annual National Assessment (ANA) approach. There are many challenges in this type of assessment, for example the fairness of the test and its comparability across years; unhappy teachers who find the process intrusive and stressful; and the affordability of the tests. The best results emerge when teacher training, mentorship and support accompanies the discussion on how to improve results.

We are only at the beginning of our “rocky road”, but believe, like Karabo above, that a “solid confident and excellent” set of results can be expected from the affordable independent school sector in the future.



THE STORY OF STANDARDISED TESTING IN THE CURRO SCHOOL NETWORK

Curro develops, acquires and manages independent schools in southern Africa and makes quality independent school education accessible to learners across their different schooling models.

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At Curro, teachers are made aware of the importance of the 3Rs (reading, writing and arithmetic), 4Cs (communication, collaboration, critical thinking and creativity) and 2Ms (motivation and meta-cognition) on a continuous basis. In addition, Curro recognises the value and importance of 21st century skills and that learners, now more than ever before, need to leave school equipped with skills which will allow them to cope in a world defined as a “global village”. Our learners will need to function in a world of uncertainty in which they face serious problems that need to be solved, both for their own and others’ survival and quality of life.

Thus, the set of 21st century skills has been adapted and incorporated (assuming that the 3Rs are in place), using what the Global Partnership calls *New Pedagogies for Deep Learning*.¹ The Deep Learning approach is based on six competencies, the 6Cs, which are: communication; collaboration; critical thinking; creativity; citizenship; and character building.

When Curro began to expand its education provision in 2011, we had to decide how to measure learner performance across our schools. We had to maintain the provision of quality teaching and learning in spite of substantial differences between the schools in terms of resources, facilities and learning outcomes.

In line with worldwide best practice, Curro has decided to use standardised assessments to test knowledge, skills and competencies.

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The importance of credible testing approaches in South Africa increased after 2000, when it became clear that, in an effort to prepare ourselves to participate in international tests such as the Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS), we needed to facilitate more effective teaching and learning.

1 For more information on Deep Learning, see <http://npdl.global/>.

With the goal of improving learners’ outcomes in our schools, in 2011, Curro decided to test learners in mathematics and in their language of instruction. Existing tests that were available in South Africa were examined extensively. After this process, Curro decided to develop its own tests, and since 2012, learners in Grades 3, 6 and 9 have been writing these tests in the language of instruction and mathematics. In 2014, a basic competency test in robotics was added for Grades 3 and 6 at schools where robotics is part of the curriculum.

The following fictitious example demonstrates the approach to the content and cognitive domains.

Analysing the Curro literacy tests

Class	Language instruction								
	Content domain		Cognitive domain						
	Overall	Reading	Writing	Literal	Interpretive	Inferential	Content	Language and style	Organisation
All	73%	82%	61%	92%	79%	78%	62%	61%	57%
6F	75%	82%	63%	92%	81%	77%	63%	62%	62%
6O	71%	82%	56%	90%	80%	77%	57%	57%	53%
6W	75%	82%	63%	94%	77%	80%	65%	65%	57%

Analysing the Curro mathematics tests

Class	Mathematics								
	Content domain						Cognitive domain		
	Overall	Number	Patterns	Geometry	Measurement	Data	Knowing	Applying	Reasoning
All	59%	68%	61%	49%	38%	57%	84%	66%	38%
6F	64%	72%	66%	68%	45%	59%	87%	74%	42%
6O	52%	62%	54%	28%	31%	55%	82%	55%	34%
6W	61%	70%	64%	52%	40%	58%	85%	70%	37%



The domains of the Curro tests are the same as the skills that are tested in the PIRLS and TIMSS tests, aligning teaching in Curro schools with teaching in the ever shrinking global village.

Curro's tests were developed exclusively by the Curro Centre for Educational Excellence as pen and paper tests for use in Curro schools. The test papers were made available to teachers after the tests were written with the aim of raising teachers' awareness of learners' errors and hence what they should be focusing on in class.

The response of curriculum experts was a positive corroboration of the work done by Curro

During 2015, when the Department of Basic Education's Annual National Assessments (ANAs) were challenged by schools, provincial education departments and teacher unions and then discontinued, the Curro tests were used in schools outside of the Curro network, in cooperation with Old Mutual, a shareholder in several affordable, independent school groups. This necessitated

a review of the tests by JET. The response of curriculum experts who verified the test content was a positive corroboration of the work done by the Curro Centre for Educational Excellence in this regard. Test validity and reliability were further affirmed by verification of the results after the tests were written at the end of 2015. Since then, Old Mutual has used the Curro standardised tests for all the school groups in which they have invested and will continue to do so for the next two years. This can provide additional information about the quality of teaching and learning in the affordable independent school market.

Curro will continue to encourage teachers to use the abundant and useful information that such tests provide to improve teaching and learning, in line with data-driven management trends all over the world. Data-driven management empowers teachers to help their learners develop their full potential and leave school with the ability to apply knowledge and concepts in different contexts. This approach also serves to limit rote learning and shift the focus from content to the skills that, as 21st century theorists are warning, will be essential for human beings to survive, let alone thrive, in the world of work beyond 2030.



WHY AFFORDABLE INDEPENDENT SCHOOLS?

... there is not just one way to approach teaching and learning today and affordable schools give us unlimited opportunities to deliver effective education.

Mampho Langa, Future Nations Schools,
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There is no doubt that the demand for affordable, independent schools is rising in South Africa. There is also a global call for high quality education in the 21st century. The mushrooming of unique, affordable, independent schools will continue to meet both unmet demand where there are no public schools and differentiated demand for quality schooling and alternative types of education.

Independent schools, including affordable ones, have the flexibility to introduce different models of teaching and learning. Schools like the Future Nation Schools use a model (the project-based learning model) that not only enhances mastery of content knowledge, but also encourages critical thinking, problem solving and designing solutions to solve problems.

In Future Nation Schools, the project-based learning model gives learners opportunities to design projects in the fields of hydraulic mechanics, electronics, sculpture, paintwork, music, dance and publishing. The products or outcomes of these projects include electronic games, books, robots and artworks. The material used for product development is inexpensive as most of it is recycled material. Exposure to project-based learning may ignite a learner's desire to pursue a particular field in the future.

A feature of Future Nation Schools that enhances their affordability is that learners are allowed to wear school clothing of their choice. They can mix and match their clothing to suit the projects that they are involved in on a particular day and are at liberty to choose clothing that is affordable for them.

Societal expectations contribute immensely to escalating the level of learner performance in affordable, independent schools. These schools work relentlessly to ensure that parents get value for the fees they pay. The performance of students is typically improved through extra classes, peer tutoring, parental involvement and the use of a variety of teaching strategies. The Department of Basic Education (DBE) also plays a pivotal role in requiring high learner performance in independent schools. Schools that cannot meet the targeted pass rates are faced with strict sanctions.

The class sizes in affordable independent schools range between 30 and 35, which gives learners sufficient opportunity to interact with their peers and teachers. At Future Nation Schools, team teaching further enhances the possibility of interacting with a teacher of their choice during a lesson. Team teaching not only benefits students, but also enables teachers to share best practice. Future Nation School's approach acknowledges that

learners today have access to a large amount of information through technology, there is certainly no need to 'spoon-feed' them the information in class, or teach using a 'one-size fits all' approach. As learners have different personalities, goals and needs, offering personalised instruction is not only possible, but also desirable. When learners are allowed to make their own choices, they 'own' their learning, and this increases intrinsic motivation, thus encouraging the learners to put in more effort – an ideal recipe for better learning outcomes. (Palmer, 2015)

The extended academic programme in affordable independent schools allows flexibility to introduce programmes that augment learners' skills. Most schools have daily programmes that extend until 17h00. Future Nation Schools have incorporated coding, programming, leadership and entrepreneurship into the curriculum to further reinforce skills such as risk-taking, grit, adaptability, tech-savviness and resilience to deal with uncertainty.

The extended academic programme in affordable independent schools allows flexibility to introduce programmes that augment learners' skills

Teacher development programmes in these schools are usually customised to address the deficiencies of individual teachers. Teachers can openly observe each other's lessons and provide feedback to each other. This sense of collegiality encourages collaborative effort and support. The belief in Future Nation Schools is that

it is critical for veteran teachers to have ongoing and regular opportunities to learn from each other. Ongoing professional development keeps teachers up-to-date about new research on how children learn, emerging technological tools for the classroom, new curriculum resources and more. The best professional development is ongoing, experiential, collaborative, connected to and derived from working with students and understanding their culture. (Edutopia, 2008)

A feature of Future Nations affordable schools is that the learning space can be adapted to suit the budget and model of »



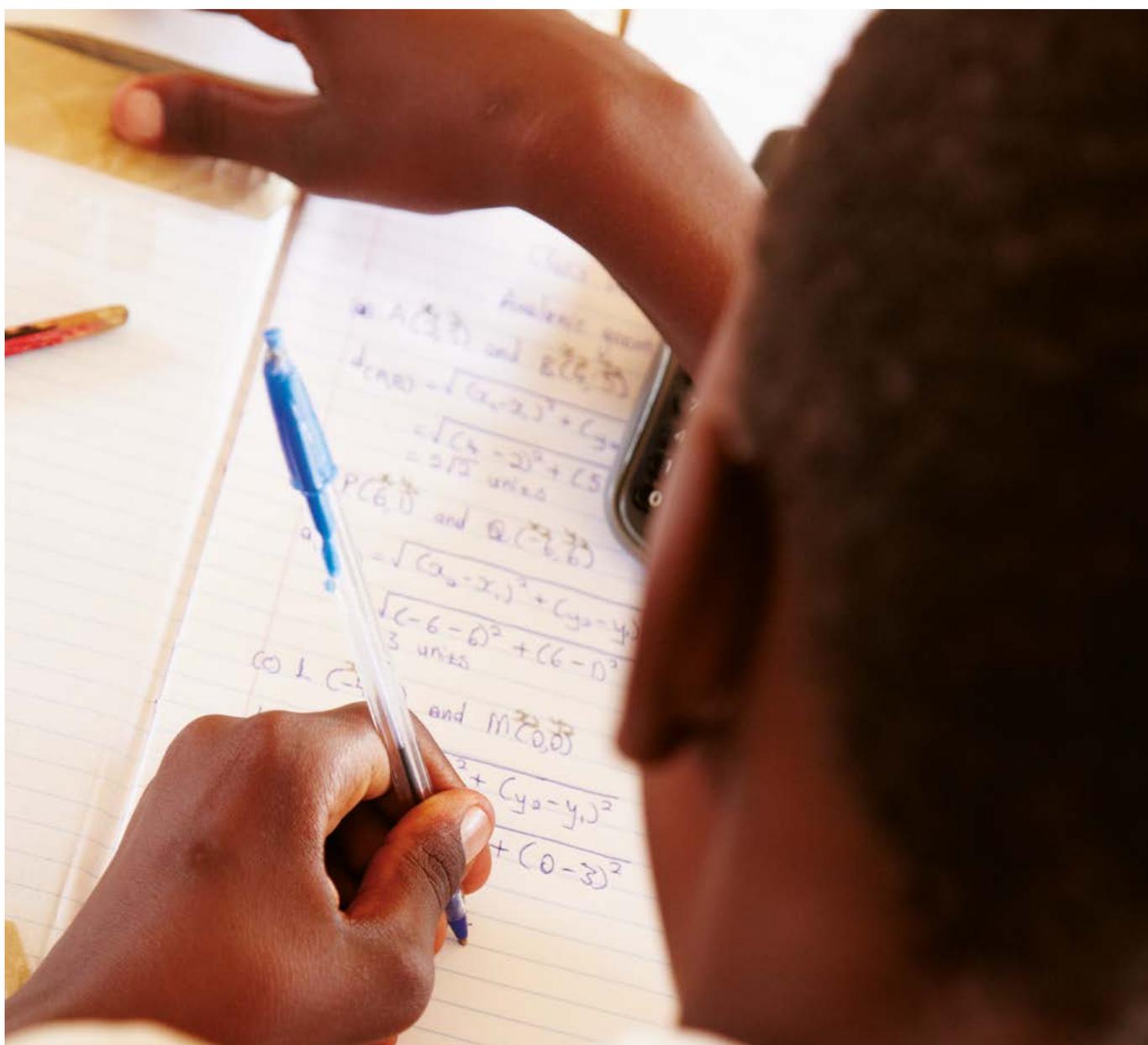
each school. Space in some schools can be maximised to accommodate mainly academic programmes and fewer sports facilities. In other schools, learning spaces can be adapted to accommodate the varying needs of the curriculum. Two single classrooms can be changed into a big team-teaching class. Desks and tables can be rearranged in any way to suit the activity of the day. Such learning spaces make teaching and learning fun and adaptable for all needs.

My experience as Head of Academics at the Oprah Winfrey Leadership Academy, Head of School at the African School for Excellence, Executive Head of Meridian Cosmo City and Head of Schools at Future Nation Schools has exposed me to different models of teaching and learning in a range of affordable independent schools. I have learnt that there is not

just one way to approach teaching and learning today and that affordable schools give us unlimited opportunities to deliver effective education. Further, thoughtful, researched, and monitored approaches will enable our learners to acquire the necessary 21st century skills and help to futureproof South Africa.

References

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BULLETIN BOARD



The JET Clearing House

The Clearing House is a portal that organises, collates and presents knowledge products resulting from educational research. These products are intended to provide various audiences involved in the education sector with evidence-based research which can be used to increase the impact of educational interventions.

Resources currently include:

- The President's Education Initiative research reports;
- The Initial Teacher Education Training Research Project reports, presentations and articles;
- The Primary Teacher Education, a four-year project of the DHET that forms a part of a suite of projects in the Teaching and Learning Development Capacity Improvement Programme resources;
- Using learners' responses to inform the teaching of mathematics;
- Resource materials based on the annual national assessments; and
- Visual perception resources for early childhood development practitioners.

JET's 25th Anniversary (2017)

JET celebrated 25 years in 2017. We marked the milestone in our history with a special Annual Meeting at which we were joined by many old friends. The photograph below shows Dr Nick Taylor (CEO from 1992 to 2012), Godwin Khosa (CEO from 2012 to 2014) and Dr James Keevy (current CEO) with the Honourable Minister of Higher Education and Training (DHET) and past JET Board Member, Naledi Pandor, at the 2017 Annual General Meeting.

As part of the celebrations, we released a series of videos that can be viewed on YouTube and that sum up JET's contribution to education in South Africa, and launched our new-look website, which features the JET Clearing House.





Publications

We added three papers to the list of in-house JET publications: The papers are available on our website and reflect the scope of JET's work in the education sector, including in the field of ICT for education:

- Taylor, N. & Shindler, J. (2017). *Education Sector Landscape Mapping: South Africa*.
- Paterson, A., Keevy, J. & Boka, K. (2018). *Exploring a Work-Based Values Approach in South African TVET Colleges to Improve Employability of Youth: Literature Review*.
- Shiohira, K, Keevy, J. & Gibbs, C. (2018). *From eMpela to Project DROID: a review of two ICT4E initiatives in South Africa*.

Developing youth through our internship programme

A highlight of our anniversary year was the consolidation of JET's internship programme. Being firmly committed to building capacity and developing youth in South Africa, we welcomed three TVET college learnership interns to our support team and employed a number of local graduates in our education divisions. We also hosted several international students as interns. Both JET and the interns benefited immeasurably from this engagement and we will continue to implement this programme in the future.

Several of our learnership interns became permanent JET staff members once their learnerships were completed. We will soon be welcoming more international interns from the University of Pennsylvania.

Recent interns at JET



It's happening at The Education Hub

In addition to being JET's home, the Education Hub houses several other non-profit organisations working in the education sector:



Bridge, an organisation that drives collaboration and cooperation among education stakeholders to increase their collective impact in improving the education system.

@BridgeProjectSA



The South African branch of the Global Campaign for Education (GCE), a civil society movement working to end the global education crisis

@globaleducation



The Zenex Foundation, an independent, donor organisation that focuses on supporting mathematics, science and language education in South African schools.

@ZenexF



The Global Teachers Institute, an organisation working to strengthen teacher capacity in South Africa and across the world by changing the way teachers are trained.

@GTI_educators



The Gauteng Education Development Trust (GEDT), a partnership between the Gauteng Department of Education (GDE) and private sector organisations which assists the GDE to improve education in the province.



Inclusive Education South Africa (IESA), a organisation working to promote and support the development of more inclusive practices in ordinary pre-schools and schools and to foster increased support of children with learning difficulties, disabilities or other support needs.

@InclusiveEdSA

Acronyms – in this edition

ANA	Annual National Assessment
CAPS	Curriculum and Assessment Policy Statements
CSI	corporate social investment
CDE	Centre for Development and Enterprise
DBE	Department of Basic Education
DHET	Department of Higher Education and Technology
EMIS	Education Management Information System
FNS	Future Nation Schools
JET	JET Education Services
PAEPL	provincial average estimated (expenditure) per learner
PIC	Public Investment Corporation
PIRLS	Progress in International Reading Literacy (PIRLS),
SADTU	South African Democratic Teachers Union
TIMSS	Trends in International Mathematics and Science Study



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