

The State of Our Education System and Principles for Improvement, *By Jamie-Lee Dormehl*



Jamie is currently completing her Masters Degree in Research Psychology at North-West University, Potchefstroom. Having completed her course work in 2017, her dissertation is focused on positive psychology interventions in schools. She holds an Honours Degree in Applied Psychology cum laude from UNISA, which she completed whilst teaching English in South Korea. Her undergrad at Rhodes University majored in Psychology and Journalism. Having joined ASRI as a Research Intern, Jamie is a curious individual intrigued by human behaviour and experiences and the complex, interrelated demographic, social, economic, psychological and biological factors that contribute towards it. Jamie aspires to assist in the creation of change through skilled knowledge and knowledge through skilled research. Her biggest dream is to contribute to the improvement of South Africa's education system. Being actively involved with individuals, communities and organisations, she aspires to work towards identifying challenges and striving towards a solution-based society by co-developing and co-implementing culturally and linguistically nuanced and informed interventions and programmes. Aware of the unique issues we are faced with in South Africa, Jamie strives for continuous personal and career development because knowledge is the justice of our people and the freedom of tomorrow.

Abstract

South Africa's education system has long been troubled by challenges. Many suggest that it is in crisis. Despite the celebration of school leaving results in recent years, many researchers have suggested that those quantified outcomes (higher numbers of matriculants, higher pass rates, and greater numbers of university entrants) obscure the poor quality of the education which they correlate with the alarming youth unemployment rates. Jamie-Lee Dormehl, a research associate at ASRI, outlines how international benchmark assessments reveal a more nuanced understanding of South Africa's basic education system, and how those assessments and the growing body of qualitative research they are informing may hold valuable insights for those interested in and committed to improving the quality of the country's education.

“Education is the great engine of personal development. It is through education that the daughter of a peasant can become a doctor; that a son of a mine worker can become head of the mine; that a child of a farm worker can become the president of a great nation. It is what we make out of what we have, not what we are given, that separates one person from another” Nelson Mandela.

According to *The Constitution of The Republic of South Africa 1996* everyone is guaranteed the right to basic education and further education. This promise of a right to education is in accordance with Article 1(1) of the *World Declaration on Education for All* adopted in 1990.

Various highly regarded international instruments have been established in order to protect the right to education, including Article 26 of the *Universal Declaration of Human Rights of 1948*, Articles 13 and 14 of the *International Covenant on Economic, Social and Cultural Rights of 1996*; Articles 28 and 29 of the *UN Convention on the Rights of the Child of 1998* and Article 2 of Protocol No. 1 to the *European Convention for the Protection of Human Rights and Fundamental Freedoms of 1953* (Rapatsa, & Matloga, 2014).

It is clear that the fundamental right to education is important across the world. It is largely understood and accepted that education is necessary for success, and the successful future of any country depends on children receiving quality basic education (Rapatsa & Matloga, 2014). Social and economic progress, durable peace, and sustained development are all dependent on the success of a society's education system (Simbo, 2012).

Any lack of access to basic education in a country leads to severe social disinvestment which compromises development of skills and knowledge necessary for children to make significant contributions to society (Rapatsa & Matloga, 2014). There are major social, economic and political benefits which are sustained from having an educated population (Simbo, 2012).

The term “basic education”, although promised to all, has not been given a definition in South Africa's Constitution. The term has its origins in the *World Declaration on Education for All* (1990), with a de-emphasis on the completion of specific formal programmes or certification requirements, and focuses on the content of education, not the form it is conducted in, and whether it is formal or informal (Murungi, 2015).

The *World Declaration on Education for All* states that the focus of basic education should be on actual learning acquisition and outcomes, and not exclusively focused on enrolment, continued participation in organised programmes and completion of certification requirements.

Basic education as a core to the right to education should thus include literacy, numeracy, skills relating to health, hygiene and personal care, social skills such as oral and other forms of expression, and problem solving (Murungi, 2015). Basic education refers to the first layer of formal schooling, with a focus on imparting the fundamental skills outlined above (Murungi, 2015). Education is extremely important, and a significant factor in the development of children, communities and countries.

Looking at the status of basic education in South Africa, the Annual Report of the Department of Basic Education (2017) reports increased numbers of young people are entering into the South African education system and successfully completing their schooling.

There has been an increase in attendance in pre-school and Grade R from 2002 to 2015 ([Education Series Vol III, 2016](#)). The class of 2016 recorded the highest enrolment of grade 12 learners in the history of South Africa ([DBE Annual Report 2017](#)). Also, the number of learners aged 15 and older who have successfully completed their matric increased from 3,7 million in 1996 to 11,6 million in 2016 ([Education Series Vol III, 2016](#)).

Unfortunately the education crisis in South Africa continues, with more learners leaving with their National Senior Certificate (NSC) in hand, but their levels of literacy and numeracy inadequate to get into either further education or training, or the job market.

Of the 534 484 learners who wrote the NSC examinations in 2017, only 28.7% received the marks necessary to apply for university entrance ([National Senior Certificate Examination Report, 2017](#)). This figure has a strong correlation with the [38.2% unemployment rate for youth](#) (15-36) and the 3.3 million (32.4%) of 10.3 million youth who are 'Not in Employment, Education or Training' (NEET). These figures do not adequately account for those who are "Not Economically Active".

The [OECD](#) reports that South Africa has the highest youth unemployment rate in the world at 53.4% (2017). Nearly two-thirds of unemployed people in South Africa are under the age of 36.

Research demonstrates the substantial impact education has on labour market outcomes, such as employment and earnings, as well as non-market outcomes like civic participation, health, longevity and criminal activity ([Riddell, 2005](#)). The relationship between education (or lack thereof) and (un)employment is clear, and with such high numbers of NEET, currently, the South African education system core to the growing social and economic troubles in the country.

In South Africa, to successfully complete high school and receive a National Senior Certificate (NSC), learners are required to take seven subjects and pass six. In their final examinations learners are expected to achieve scores of at least 40% in their home language, 40% in two subjects and 30% of three subjects ([Fridie, 2018](#)).

Without being required to know more than 50% of what they have been taught, the skill sets and level of proficiency with which South African learners leave school are inadequate for the demands of the employment market. It is not much more difficult to get a university exemption, you cannot "fail" any of your subjects, but you only need 40% for five subjects and 30% for two ([Fridie, 2018](#)). The class of 2017 reportedly achieved one of the highest pass rates in the last ten-years, with 75.1% of the class passing their matric exams.

Why are so many young people unable to find jobs? Higher pass rates do not necessarily mean the system has improved; learners are ill-prepared because the quality of their education, in most cases, does not arm- them sufficiently to enter into employment, education or training. It is worth noting that the above pass rate does not

consider the 38.49% of learners who dropped out of school sometime between their enrolment in the first year of school and their matric examinations for what would have been the class of 2017. Thus many argue that the [true matric pass rate for 2017 was 39.25%](#), which is more aligned with the employment statistics ([My Broadband, 2018](#)).

The South African government spends 17.7% of the total state expenditure and 4.9% of its GDP on education (UNICEF, 2017); this is more than it spends on any other sector (*South Africa Info*, 2016). South Africa has one of the highest rates of public investment in education in the world. Nevertheless, despite this expenditure, the South African education system is said to be one of the worst performing in the world (*The Economist*, 2017), with the quality of the education the core of its performance problems (Iwu, Gwija, Benedict, & Tengeh, 2013; Letsaka, 2013).

When looking at South Africa's education system from a global perspective, a gloomy picture emerges. The country placed [38th for Mathematics](#) performance (score 372) and [39th for science performance](#) (score 385) out of 39 countries in the Trends in International Mathematics and Science Study (TIMSS). In comparison, Singapore ranked first for both performance indicators, scoring 621 and 597 respectively. The TIMSS results indicate the degree to which learners have mastered mathematics and science concepts which they (should) have been taught in school.

South Africa also participated in the [Progress in International Reading Literacy Study \(PIRLS\)](#) to monitor learner reading and comprehension within and across languages. The most recent PIRLS data from 2016 assessed samples of learners which were nationally representative and stratified; 12 810 Grade 4 learners and 5282 Grade 5 learners participated in the PIRLS in 2016.

South Africa was placed last (with a mean score of 320) out of the 50 countries that participated in PIRLS, the Russian Federation achieved the highest mean score of 581. Around 78% of South Africa's Grade 4 learners did not reach the international benchmark and thus were deemed not to be equipped with basic reading skills, unable to read for meaning or retrieve basic information from text to answer simple questions.

The principal goals of international assessments like TIMSS and PIRLS is to evaluate the curriculum with reference to international benchmarks and assess whether the education system has improved over time, how equitable it is, and to compare South African students with their peers in other countries.

[Research](#) demonstrates that countries' school systems and their institutional structures (specifically teacher quality and instruction time) account for a substantial part of cross-country variation in student achievement. The importance of strong literacy and numeracy skills cannot be understated, because learner achievement in school is a key determinant of later individual success in education and work.

It is important for South Africa to build an education system which is comparable to others across the world, especially in light of globalisation and the current and future transformations of the economy and its demands on the workforce.

Comparing international educational achievement across nation states is not an easy task, because different cultures are a source of cross-country differences and similarities, and ingrained social values have an effect on learner performance.

In order to account for differing curriculum standards which occur within individual countries as well as between different states, the reliable international assessments collect descriptive data regarding the context for teaching and learning for each country from student-, teacher- and school questionnaires.

National research coordinators ensure that passages, test items, and questionnaires are translated accurately into the languages of instruction by participating countries, creating high quality translations which are adapted for the national context and internationally comparable ([TIMSS USA](#)). It is ensured that assessment items can reasonably measure mathematics, science and reading skills of each country's education system's learner population samples.

The TIMSS and PIRLS results should allow governments to see where their education systems' strengths and weaknesses lie, and to further ensure that these areas become the target of education reform, capacity building and financial support. Unfortunately this is not always the case.

The results of international assessments give the wider public insight into which countries have the best education systems and what makes those systems successful. This information empowers the public to hold their government accountable for what should be implemented as well as how it should be implemented, prior to expensive and ineffective reforms and policies being established.

This data and the country analysis and reports are easily accessible, however they are not always read by the public. And although these analysis and reports of what is occurring in the education system with regards to achievement are of importance, it is also imperative that governments understand why and how these findings have been researched in their own country and in comparison to other more successful countries.

Various issues contribute to the poor quality of education in South Africa. The range of quality in schools varies greatly in South Africa, both between government and private schools, and between government schools themselves (Mobius, 2017). Government schools sometimes charge additional fees to maintain standards and facilities, which explains the difference in the quality of education in wealthier neighbourhoods compared to poor neighbourhoods where families are unable to afford such surcharges (Mobius, 2017).

The majority of learners are located in the historically disadvantaged system, which still serves mainly black children (Van der Berg, Taylor, Gustafsson, Spaul, & Armstrong, 2011).

Learners from these areas typically demonstrate lower proficiency in reading, writing and numeracy. Learners in wealthier neighbourhoods attend schools which historically served white children in the colonial and apartheid periods, and produce an educational achievement closer to the norms of developed countries. It is mostly white and so-called Indian learners who attend these schools, although Black and so-called Coloured middle class children are increasingly migrating to these schools (Van der Berg et al., 2011).

Approximately 20% of South Africa's public schools produce acceptable educational outcomes, consisting of 10% of formerly whites-only schools and exceptional township and village schools make up the other 10%. This means that only one in nine township

and village schools actually deliver their stated educational purpose (Westaway, 2015).

Thousands of schools in South Africa lack the infrastructure necessary to provide learners with good quality education. The most recent National Education Infrastructure Management System (NEIMS, 2018) reports that 70% of South Africa's public schools are without libraries; this varies across regions: 93% of schools in the Eastern Cape and Limpopo lack this resource, 81% in Mpumalanga, 76% in KwaZulu-Natal and the North West, 69% in the Northern Cape, 45% in the Western Cape, and 37% in Gauteng.

Of the 23577 ordinary operational schools surveyed in the NEIMS 2018 Standard Report, 15897 are without computer centres, and 20292 are without a laboratory; 569 schools lack any electricity supply, and 2923 have an unreliable electricity supply – KwaZulu-Natal and the Eastern Cape account for most of the schools in these latter groups (NEIMS, 2018).

School sanitation is another area of concern: 62 schools in the Eastern Cape are without ablution facilities, 9203 (of the total 23577) use a pit for an ablution, 1750 use 'enviro-loos', 7105 use VIPs, 199 use mobile toilets, 94 use chemical toilets, 2912 use flush toilets with a septic tank and 8574 use municipal flush toilets. School safety is a further area which needs to be addressed: 1399 schools have no fencing surrounding the school and 59 schools have no security, 21591 schools have a gate and 1844 schools have access control. Extramural and sporting activities also need to be developed: 9907 schools are without any sports facilities (NEIMS, 2018).

The lack of professionalism among teachers has been identified as a contributor to the education crisis in South Africa (De Wet, 2016). In a quest to ensure all teachers are adequately qualified, a qualification framework for teachers was implemented, which led to the current four-year teacher training qualification and prerequisite that all newly qualified teachers must hold a university degree (De Wet, 2016).

However, in 2013, 7076 unqualified teachers, with only a Grade 12, were on the Department of Basic Education's payroll. There were also 2642 under-qualified teachers who have a Grade 12 and one or two years of tertiary education (De Wet, 2016). Savides (2017) reported that 5139 teachers are unqualified, and the majority of these work in rural KwaZulu-Natal.

The DBE plans to address some of the problems outlined above by 2030, and have set itself twenty-seven goals. Goals one to thirteen deal with the outputs they aim to achieve in relation to learning and enrolments, and the next fourteen deal with how the proposed outputs are going to be achieved.

The first three aim to increase the number of learners who have mastered minimum language and numeracy competencies for Grades 5, 6 and 9 respectively. Goal four is to increase the number of matric learners eligible for admission to a bachelor's degree. And goals five and six aim to increase the number of matric learners who pass mathematics and science (30%).

The next three goals aim to improve the average performance of learners. Goal ten focuses on ensuring that all children remain in school until at least the age of fifteen. The

rest aim to improve access to Early Childhood Education and Further Education and Training, and improve the grade promotion of learners through Grades 1 to 9.

The last fourteen goals relate to the strategies to achieve the above-mentioned output goals, if implemented, would bring about much-needed changes in the education system. These include attracting new teachers, improving their professionalism and skills and ensuring their job satisfaction, increasing access to textbooks, information and communication technology, e-education, better funding, improved infrastructure, inclusive education and improved frequency and quality of the monitoring and support services.

Unfortunately there is a gap between policy and outcomes. In South Africa the policies are sound and well-intentioned, but numerous challenges contribute to public policies not yielding expected results as stated in the policy directives of specific policy documents ([Tebele, 2016](#)). Challenges which contribute to public policy implementation include non-compliance with public policy, as well as a lack of knowledge, skills, experience and expertise in the public environment ([Tebele, 2016](#)).

The Department of Basic Education states that its number one priority is to improve the quality of teaching and learning. The South African government seeks credit for an improved education system. Qualitative assessment of the system as opposed to relying on easily quantifiable measures means it is more difficult for government to get credit for policies which actually improve school quality, therefore the policies for which credit can be easily taken are prioritised. Such policies include creating more textbooks, hiring more teachers, expanding school enrolment, getting learners to remain in school for longer, and decreasing school fees. These are all very important, but other factors should be considered when striving to improve the quality of basic education.

The Department of Basic Education website publishes well-written updates of progress and developments made to improve the quality of the education system. These include notifications that nearly 100% of learners aged between 7 and 15 years-old have been enrolled in school; enrolment for Grade R almost doubling from 2003 to 2013. Also, more learners are successfully completing 12 years of schooling, with the class of 2016 being the highest enrolment of Grade 12 learners in the history of South Africa.

Although these steps may be necessary for progress, churning more students out of an education system in which the pass rate is lowered as far as it is in South Africa is not really beneficial. As evidenced by more than half of the youth in South Africa being unemployed, with unemployment numbers increasing. In the second quarter of 2018 data from the Quarterly Labour Force Survey ([QLFS](#)) showed that youth (aged 15 to 24) who have a matric certificate have an unemployment rate of 53.6% ([SAnews.gov.za](#)).

The DBE's Action Plan to improve education by 2030 is admirable, but it is not enough to address the issues identified by benchmark tests. To really improve the quality of education in South Africa, more campaigns like the [Kha Ri Gude Mass Literacy Campaign](#) may be useful. This campaign has since 2008 changed the lives of 4 386 251 South African learners who could not initially read and write.

What is required to improve the quality of education in the country are new classroom models for teaching that successfully increase the numeracy and literacy skills of learners.

For learning in literacy and numeracy to be meaningful and applicable inside and beyond the classroom, teachers should undergo professional training. Research indicates that the training should be grounded in inquiry and reflection, be participant-driven, and have its focus on improving planning and instruction. It must be collaborative, involve the sharing of knowledge and focus on communities of knowledge rather than on individual teachers ([Fullan, 2011](#)).

The training must be on-going, intensive and supported by modelling, coaching and the collective solving of specific problems, in order for teachers to implement their training in schools, and sustain changes within educational practice ([Fullan, 2011](#)). The training should be connected to and derived from teachers' work with learners – teaching, assessing, observing and reflecting on the processes of learning and development ([Fullan, 2011](#)).

Along with new classroom models, there should be changes in the curriculum that improve the literacy and the understanding of concepts of the science and mathematics taught in school.

In curriculum reform, the teachers' views of what constitutes good teaching should be considered. In order to develop a new curriculum it is necessary to ask questions relating to what kind of society we want to build and the role to be played by basic- and higher education institutions (Blignaut, 2017).

Changes in curriculum coverage and management will also be necessary; research indicates that there is a major curriculum coverage deficit in South Africa ([Christie, & Monyoko, 2018](#)). The most recent statistics from the DBE in 2011 show that only 6% of South Africa's Grade 9 learners had met the minimum curriculum coverage for mathematics, and 0% had covered the minimum coverage for language ([Christie, & Monyoko, 2018](#)).

Curriculum management includes planning, developing, monitoring and reviewing the schools educational programme to ensure a match with school goals and appropriate allocation of resources ([Christie, & Monyoko, 2018](#)).

New policies which emphasise a teacher-directed, group work, active learning approaches, should be established and introduced to schools; this could improve Annual National Assessments and matric results. Additionally, policies which account for the literacy and numeracy skills of South African learners and improve these skills so that they become favourable comparably internationally should be developed. International comparisons provide feedback on how systems have improved over time, how equitable they are, and how learners compare to their peers around the world.

It is not as easy for the government to take credit for the less quantifiable effects of such suggested policies. We think that because we reside in a democratic country that our education system is better than non-democratic countries', because we care about equal quality education and the government wants to make us, the voters, happy. However, plans and policies are written and action is taken which look as though they will improve the quality of education.

But, as seen in the update of progress and developments, the government's focus seems to be on the quantity not quality in their assessment of progress in education. So we are successfully providing more education, but not necessarily better education.

There is no straightforward or single way to improve the quality of South Africa's education system. A potentially good place to seek advice could be those countries in which the education systems seem to be providing the highest quality education. These countries are those which achieve the highest results in international assessments, including; Singapore, Hong Kong, South Korea, Japan, Northern Ireland, Russia, Estonia, Finland, and Canada.

Lucy Crehan, a teacher, education explorer, author and education consultant travelled around the world to gain a deep understanding of how education works in various national settings. Crehan visited five of the top ten best PISA (Programme for International Student Assessment) performing schools in the world. PISA is an international study which covers 80 countries, and provides comparative data on 15-year-olds' performance in reading, mathematics and science. The results inform education policy discussions at a national and global level.

South Africa does not currently participate in PISA. However, the countries that fare well in PISA, also fare well in the TIMSS.

These international assessments allow nation states to identify success in particular areas of education and learn from systems that are doing better. These results should however not be used in isolation without considering culture, the arts, appreciation of citizenship and personal and social attributes.

Crehan spent a month in Finland, Canada, Singapore, Japan, and the People's Republic of China with the goal of figuring out what makes these systems thrive, adding a necessary qualitative dimension to quantitatively focused international assessment.

Crehan's research was inspired by her desire to make education systems better and support learners to have better outcomes and opportunities, without running the school staff into the ground. The answer is not to enrol more students into inefficient education systems; it is a complex and interrelated process for which various pieces are woven together to create a basket which is strong enough to uplift the nation through education.

Each country has unique successes and challenges; however, Crehan suggests the following must be understood and implemented by policy makers. Crehan shares five principles which she believes underlies high performing, equitable education systems. The different countries did not all share the same methods in achieving these principles and approaches, they were applied differently based on context and politics within each country; however, the principles and approaches were similar.

Principle 1: Get Children Ready for Formal Learning (Crehan, 2016)

Children enter school at varying levels of preparedness, from more socially and economically advantaged or less advantaged homes. Therefore nursery school and pre-school are extremely important; however the focus should not be to start teaching them to read and count as early as possible, by imposing higher academic expectations and

more academically orientated education on children at or younger than the age of 6 (2016).

Focusing on specific academic skills and making classes more teacher-directed, at the expense of broader development and child-initiated activity like free play can have long term negative effects on motivation, social behaviour, emotional health and self-esteem, and no lasting positive effects on academic outcomes (Crehan, 2016).

Children should not be expected to demonstrate specific academic outcomes such as reading or adding before the age of 7 (Finland, Singapore and China) or 6 (Canada and Japan). By the time these outcomes are expected, most children have developed the skills, attitudes, knowledge and understanding necessary to achieve these outcomes (Crehan, 2016).

Children do not develop skills and knowledge themselves and thus, accessible, high-quality programmes for the early years are a crucial and long-term investment. Research demonstrates that the most effective early-year programmes are those which build motivation and character, as well as cognitive skills, with a balance between social and cognitive development (Crehan, 2016).

The cognitive development should be aimed at developing pre-academic skills through rich environments and playful learning (Crehan, 2016). Routines should be taught early on in children's development, to prevent emotional disturbances in class transitions, and saving time in the future to focus on other development. Schools should be resourced with multi-disciplinary teams of professionals (these need not be full-time in smaller schools) who are able to address children's non-academic needs, such as social or emotional problems (Crehan, 2016). A stable foundation of the right social skills, pre-academic skills, and early identification of issues, is vitally important, and sets children up for the rest of their education, which in turn has a positive impact on their life.

Principle 2: Design Curricula for Mastery (and Context for Motivation) (Crehan, 2016)

Crehan (2016) found that the best education systems have high quality and carefully designed national or provincial curricula developed in alignment and materials are not overloaded, in illogical order, or overly-prescriptive (which involves telling teachers exactly what to do without allowing them autonomy by simply providing suggestions or describing what is done).

The curriculum should equip all children with access to key content to enrich their lives at each stage, ensuring they understand the concepts necessary to address the next topic. The curricula should be: *minimal*, with a focus on fewer topics which are covered in greater depth; *high-level*, clear on the required context and skills, without prescribing context or pedagogy; and concepts should be logically ordered based on how children learn (Crehan, 2016).

A common national or provincial curriculum, should ensure that curriculum entitlement (Crehan, 2016), a curriculum of worthwhile knowledge, understanding and experience to which every pupil should be entitled, is not dependent on individual schools. This would assist in ensuring parity and consistency, allowing children to move between schools, and contribute to the equity in a system (Crehan, 2016).

Such a curriculum would not mean a lack of autonomy for schools since what schools teach ought to be broader than what is prescribed.

Governments should resist adding more to the national curriculum to align with new initiatives and leave the inclusion of new materials to the schools. Schools should also have the autonomy over how the curriculum is taught, as long as the national curriculum is high-level and provides concepts not contexts (Crehan, 2016).

Curricula should be motivational and meaningful and relevant to the lives of the children, and teachers should know their learners individually. What should be avoided in ensuring a level of autonomy in schools is attaching too much importance to an external test (Crehan, 2016), for in such a system teachers would teach based on examinations or past test papers and lose the freedom to interpret the national curriculum (Crehan, 2016).

Unfortunately too many teachers in South Africa lack adequate teaching qualifications and thus lose their autonomy within the system. In order for the autonomy of teachers to increase, it would be necessary to ensure that all teachers are qualified with four-year teacher training qualifications and that all newly qualified teachers hold a university degree (De Wet, 2016).

Principle 3: Support Children to Take On Challenges, Rather than Making Concessions

Crehan (2016) found that this principle applies to parents, teachers, school leaders and system leaders, and the effects can be seen in homes, classrooms, schools and whole countries.

With diminishing numbers of low-skill jobs due to technological advancements, it is both desirable and possible to educate almost everyone to higher levels than has been done historically (Crehan, 2016).

Intelligence develops over childhood, and the speed and ease of the development depend on both genetic and environmental factors (Crehan, 2016). Children's school performance is highly correlated to their level of intelligence, but not defined by it; teaching quality, parental support and student effort make a difference too. Children must understand the idea that intelligence is malleable, all children should be expected to reach common standards. Children should not be selected into different schools or classes until the age of 15 or 16 (Crehan, 2016).

There should be mixed ability classes, with learners attempting the same curriculum (with an emphasis on mastery, where fewer topics are covered and everyone has the opportunity to reach a minimum understanding of each topic and those who pick it up quickly can explore it in greater depth).

Less able learners should be supported to reach these standards by teachers and parents, with additional teaching and tutoring (with one-to-one or small group attention), and by having high expectations of these children (Crehan, 2016).

Concessions or sending them to a different school or class or giving them a different curriculum should not be the immediate approach for less able learners. Children with

severe special needs may benefit from more specialist provision, however this should be based on psychological diagnosis and not scoring badly on a school test (Crehan, 2016). Gifted children could also be provided the opportunities of small group interaction (with older peers) to learn beyond the curriculum.

Principle 4: Treat Teachers as Professionals

It is necessary to be selective about who enters into teaching programmes. These training programmes should be rigorous, including the study of pedagogical knowledge, recognised by a professional body, and run at respected institutions, lasting at least a year (Crehan, 2016).

Teachers should only be certified if they successfully pass these programmes as well as an induction period (Crehan, 2016). As mentioned earlier, thousands of South African teachers are un- or under-qualified, with only a Grade 12 and perhaps a year or two of tertiary education, yet they remain on the Department of Basic Education's payroll (De Wet, 2016).

Teachers should not be employed unless they have successfully completed their qualifications. They should also be monitored for the first few years and remain in close collaboration with experienced colleagues beyond weekly planning sessions offering support (Crehan, 2016). Teachers should be given autonomy to get on with their own work, whilst being supported by further professional development. This will assist with making the profession more attractive and allow for the training programmes to be more selective (Crehan, 2016).

It should be a professionalising cycle whereby teachers achieve mastery, autonomy and relatedness, which enhances intrinsic motivation. This is relatable to the value of teaching as a profession in terms of financial reward and social status in South Africa and globally.

Principle 5: Combine School Accountability with Social Support (Rather Than Sanctions)

Crehan found that the highest achieving education systems monitor school performance at a local or national level using school level data and irregular national assessments (2016). This allows for information to be provided on which schools most need support such that those schools can be provided with the necessary support.

Accountability in school systems should refer to responsibility and answerability (not culpability and liability) (Crehan, 2016). Networks should be created so that successful former school leaders visit schools regularly and provide leaders in practice with advice, support and connections. Good teachers and middle leaders should be incentivised to work in struggling schools and provide pedagogical leadership to other staff (Crehan, 2016).

Administrative or high stakes accountability should be avoided, so that schools performing below a certain threshold are not threatened with closure, takeover, or financial sanction. This makes school leaders fearful for their jobs and reputations. Being stressed will not help those affected to come up with innovative solutions; instead it shuts down creativity (Crehan, 2016).

It may make teachers focus more narrowly on complying with policy demands, such as giving extra attention to certain threshold learners at the expense of others, placing low attaining students into special education programmes to exempt them from tests, and perhaps even cheating (Crehan, 2016).

It is important to understand that all these parts of a system need to work together and be consistent with each other, the principles are mutually reinforcing and although they can be addressed differently in different places, they should act together to bring about high quality, equitable education, especially in maths, reading and science.

References

- Blignaut, S. (2017). The curriculum must be about change. Retrieved from <https://mg.co.za/article/2017-06-15-00-the-curriculum-must-be-about-change>
- Christie, P. & Monyokolo, M. (eds). (2018). *Learning about sustainable change in education in South Africa: the Jika iMfundo campaign 2015 2017*. Saide: Johannesburg.
- Crehan, L. (2016). *Cleverlands: The secrets behind the success of the world's education superpowers*. Unbound: London.
- Department of Basic Education (2016). Annual Report 2016/2017. Retrieved from <https://www.education.gov.za/Portals/0/Documents/Reports/DBE%20Annual%20Report%202017.pdf?ver=2017-09-26-090956-673>
- Department of Basic Education. (2016). National Education Infrastructure Management System Standard Report June 2016. Retrieved from <https://www.education.gov.za/Portals/0/Documents/Reports/NEIMS%20Report%20%2020172018.pdf?ver=2018-01-30-120305-787>
- De Wet, C. (2016). The status of teaching as a profession in South Africa. In N. Popov, C. Wolhunter, J. Kalin, G. Hilton, J. Ogunleye, & E. Niemczyk (eds), *Education provision to every one: Comparing perspectives from around the world*. BCES Conference Books, 14(1), 143-149. Bulgaria: Bulgarian Comparative Education Society.
- Education Series Volume III: Educational Enrollment and Achievement. (2016). Retrieved from http://www.statssa.gov.za/publications/Report%2092-01_03/Report%2092-01-032016.pdf
- Fridie, A. (2018). What are the matric pass requirements? Retrieved from <https://www.parent24.com/Learn/High-school/what-is-a-matric-pass-20160106>
- Fullan, M. (2011). Improving student achievement in literacy and numeracy: job embedded professional learning. Retrieved from http://eworkshop.on.ca/edu/pdf/Mod42_prof_learn.pdf

Iwu, C. G., Gwija, S. A., Benedict, H.O., & Tengeh, R. K. (2013). Teacher job satisfaction and learner performance in South Africa. *Journal of Economics and Behavioral Studies*, 5(12), 838-850.

Letseka, M. (2013). The illusion of education in South Africa. *Procedia - Social and Behavioral Sciences*, 116, 4864-4869.

Mobius, M. (2017). South Africa: Key issues and challenges. Retrieved from <https://www.howwemadeitinafrica.com/south-africa-key-issues-challenges/58005/>

Murungi, L. (2015). Inclusive basic education in South Africa: Issues in its conceptualisation and implementation. *Potchefstroom Electronic Law Journal*, 18(1), 3160-3195. Retrieved from <https://www.ajol.info/index.php/pej/article/view/117022/106590>

National Center for Education Statistics. (date unknown). Trends in International Mathematics and Science Study (TIMSS). Retrieved from <https://nces.ed.gov/timss/faq.asp>

Organization for Economic Cooperation and Development. (2017). Youth Unemployment Rate. Retrieved from <https://data.oecd.org/unemp/youthunemployment-rate.htm>

Rapatsa, M., & Matloga, N. (2014). The right to basic education in South Africa: Lessons from Section 27 and others v minister of education and another (2012). *Mediterranean Journal of Social Sciences*, 5(27), 1120-1126.

Report for the National Planning Commission. Retrieved from <http://resep.sun.ac.za/wpcontent/uploads/2012/10/2011-Report-for-NPC.pdf>

Riddell, W. C. (2005). The Impact of Education on Economic and Social Outcomes: An Overview of Recent Advances in Economics. Retrieved from <https://pdfs.semanticscholar.org/bac0/aae64a3e4cfc6e0ad65a887c3b5c136662e.pdf>

SAnews.gov.za. (2018). Unemployment increases in second quarter of 2018. Retrieved from <https://www.sanews.gov.za/south-africa/unemployment-increases-second-quarter-2018>

Savides, M. (2017). South African schools have 5,139 teachers who are unqualified or under-qualified. *Times Live*. Retrieved from <https://www.timeslive.co.za/news/south>

Simbo, C. (2012). Defining the term basic education in the South African constitution: An international law approach. Retrieved from https://pocketlawza.africanlii.org/za/journals/simbo-c-defining-term-basic-education-south-african-constitution-international-law-approach-p-162/2012_9.pdf

South Africa Info. (2016). Education in South Africa. Retrieved from <https://www.southafrica.info/about/education/education.htm#.V2SmoOQck4M>

- Spaull, N. (2018). My Sunday Times article on Matric 2017. Retrieved from <https://nicspaull.com/2018/01/14/my-sunday-times-article-on-matric-2017/>
- Statistics South Africa. (2018). Youth Unemployment Still High in Q1 2018. Retrieved from <http://www.statssa.gov.za/?p=11129>
- Tebele, M. (2016). Problems and challenges related to public policy implementation within the South African democratic dispensation: A theoretical exploration. (Unpublished master's thesis). North-West University, South Africa
- The Economist*. (2017). South Africa has one of the world's worst education systems. Retrieved from <https://www.economist.com/news/middle-east-and-africa/21713858why-it-bottom-class-south-africa-has-one-worldsworsteducation?zid=304&ah=e5690753dc78ce91909083042ad12e30>
- The Freedom Charter. (1955). Retrieved from http://www.historicalpapers.wits.ac.za/inventories/inv_pdfo/AD1137/AD1137Ea6-1-001-jpeg.pdf
- The Universal Declaration of Human Rights. (1948). Retrieved from https://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf
- TIMSS. (2015). Highlights of Mathematics and Science Achievement of Grade 9 South African Learners. Retrieved from <https://www.education.gov.za/Portals/0/Documents/Reports/TIMSS%202015%20Highlights%20Report%20-%20Grade%209.pdf?ver=2016-11-29-151942-727>
- United Nations Children's Fund (UNICEF). (2017). Education budget of South Africa. Retrieved from https://www.unicef.org/esaro/UNICEF_South_Africa_-_2017_Education_Budget_Brief.pdf
- Van der Berg, S., Taylor, S., Gustafsson, M., Spaull, N., & Armstrong, P. (2011). *Improving Education Quality in South Africa*. Stellenbosch: South Africa:
- Westaway, A. (2015). Towards an explanation of the functionality of South Africa's 'dysfunctional' schools. Retrieved from <https://www.ru.ac.za/media/rhodesuniversity/content/uhuru/documents/Functionality%20of%20SAs%20dysfunctional%20schools.pdf>
- Woessmann, L. (2016). The Importance of School Systems: Evidence from International Differences in Student Achievement. Retrieved from <http://ftp.iza.org/dp10001.pdf>
- World Declaration on Education for All and Framework to Meet Basic Learning Needs. 1990. Retrieved from <http://unesdoc.unesco.org/images/0012/001275/127583e.pdf>