Action Plan to 2019

Towards the realisation of Schooling 2030

Taking forward South Africa's

National Development Plan 2030

basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

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The 27 Schooling 2030 goals

This plan has 27 goals. Goals 1 to 13 deal with outputs we want to achieve in relation to learning and enrolments. Goals 14 to 27 deal with *how* the outputs are to be achieved. **Five priority goals** are indicated by three stars (★★★). In the interests of continuity, the 27 goals are the same as those appearing in the 2011 Action Plan (the one exception is Goal 9).

Goal 1	Increase the number of learners in Grade 3 who, by the end of the year, have mastered the minimum language and numeracy competencies for Grade 3.
Goal 2	Increase the number of learners in Grade 6 who, by the end of the year, have mastered the minimum language and mathematics competencies for Grade 6.
Goal 3	Increase the number of learners in Grade 9 who, by the end of the year, have mastered the minimum language and mathematics competencies for Grade 9.
Goal 4	Increase the number of Grade 12 learners who become eligible for a Bachelors programme at a university.
Goal 5	Increase the number of Grade 12 learners who pass *mathematics*.
Goal 6	Increase the number of Grade 12 learners who pass *physical science.*
Goal 7	Improve the average performance of *Grade 6* learners in *languages*.
Goal 8	Improve the average performance of *Grade 6* learners in *mathematics*.
Goal 9	Improve the average performance of Grade 9 learners in *mathematics*.
Goal 10	Ensure that all children remain effectively enrolled in school at least up to the year in which they turn 15.
Goal 11 ★★★	Improve the access of children to quality Early Childhood Development (ECD) below Grade 1.
Goal 12	Improve the grade promotion of learners through Grades 1 to 9.
Goal 13	Improve the access of the youth to Further Education and Training (FET) beyond Grade 9.

Goals 14 to 27 deal with the things we must do to achieve our 13 output goals.

Goal 14	Attract a new group of young, motivated and appropriately trained teachers to the teaching profession every year.
Goal 15	Ensure that the availability and utilisation of teachers are such that excessively large classes are avoided.
Goal 16 ★★★	Improve the professionalism, teaching skills, subject knowledge and computer literacy of teachers throughout their entire careers.
Goal 17	Strive for a teacher workforce that is healthy and enjoys a sense of job satisfaction.
Goal 18	Ensure that learners cover all the topics and skills areas that they should cover within their current school year.
Goal 19 ★★★	Ensure that every learner has access to the minimum set of textbooks and workbooks required according to national policy.
Goal 20	Increase access amongst learners to a wide range of media, including computers, which enrich their education.
Goal 21 ★★★	Ensure that the basic annual management processes take place across all schools in the country in a way that contributes towards a functional school environment.
Goal 22	Improve parent and community participation in the governance of schools, partly by improving access to important information via the e-Education strategy.
Goal 23	Ensure that all schools are funded at least at the minimum per learner levels determined nationally and that funds are utilised transparently and effectively.

Goal 24	Ensure that the physical infrastructure and environment of every school inspire learners to want to come to school and learn, and teachers to teach.
Goal 25	Use schools as vehicles for promoting access to a range of public services amongst learners in areas such as health, poverty alleviation, psychosocial support, sport and culture.
Goal 26	Increase the number of schools that effectively implement the inclusive education policy and have access to centres that offer specialist services.
Goal 27 ★★★	Improve the frequency and quality of the monitoring and support services provided to schools by district offices, partly through better use of e-Education.

Contents

Acronyms used

ACER	Australian Council for Educational Research
AIDS	Acquired immunodeficiency syndrome
AMESA	Association for Mathematics Education of South Africa
ANA	Annual National Assessments
ASIDI	Accelerated Schools Infrastructure Delivery Initiative
CAPS	Curriculum and Assessment Policy Statement
CPTD	Continuing professional teacher development
DBE	Department of Basic Education
DPMA	Department of Performance Monitoring and Evaluation
ECD	Early Childhood Development
EGRA	Early Grade Reading Assessment
FET	Further Education and Training
FOSS	Free and open source software
GET	General Education and Training
GHS	General Household Survey
HIV	Human immunodeficiency virus
HL	Home language
ICT	Information and communication technologies
IEB	Independent Examinations Board
IQMS	Integrated Quality Management System
LURITS	Learner Unit Record Information Tracking System
MST	Mathematics, science and technology
MTSF	Medium Term Strategic Framework
NAEP	National Assessment of Educational Progress
NDP	National Development Plan
NECT	National Education Collaboration Trust
NEEDU	National Education Evaluation and Development Unit
NGO	Non-government organisation
NSC	National Senior Certificate
NSNP	National School Nutrition Programme
PIRLS	Progress in International Reading Literacy Study
PLC	Professional learning community
SACE	South African Council for Educators
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SGB	School Governing Body
SMS	School Monitoring Survey
Stats SA	Statistics South Africa
STI	Sexually transmitted infection
TB	Tuberculosis
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WEF	World Economic Forum

The following acronyms are used for the provinces:

EC	Eastern Cape
FS	Free State
GP	Gauteng
KN	KwaZulu-Natal
LP	Limpopo
MP	Mpumalanga
NC	Northern Cape
NW	North West
WC	Western Cape

1 Purpose of the Action Plan

☞ **The NDP on the role of educational quality in the national development process:**

Improved education … will lead to higher employment and earnings, while more rapid economic growth will broaden opportunities for all and generate the resources required to improve education. (p. 26)

This plan, produced by the Department of Basic Education (DBE), represents another milestone in the journey towards quality schooling for all South Africans. This document takes stock of key developments in the basic education sector since the release in 2011 of the last sector plan, *Action Plan to 2014: Towards the realisation of Schooling 2025*. It reiterates many of the priorities outlined in the earlier plan, as to a large extent priorities have remained the same in recent years. However, there are also shifts of emphasis in the wake of lessons learnt and, very importantly, priorities put forward by the National Development Plan (NDP) released by the President in 2012[1]. In line with the NDP, the planning horizon in the current plan is 2030, and no longer 2025. The medium term horizon is set at 2019, which is the end of the 2014 to 2019 electoral cycle.

The current plan is directed at a broad range of stakeholders involved in the momentous task of transforming South Africa's schools. These stakeholders include parents, teachers, school principals, officials at the district, provincial and national levels, members of Parliament, leaders in civil society organisations, including teacher unions, private sector partners, researchers, and international partner agencies such as UNICEF and the World Bank. The document also serves to share with people outside the country, including foreign investors, ideas and strategies that South Africans firmly believe will enhance our education levels, and hence our prosperity, social cohesion, and ability to contribute to global development.

This plan provides continuity insofar as it follows the basic structure of the previous sector plan, which we shall refer to as the 2011 Action Plan in this document. Thus the original 27 goals covering a broad range of issues and interventions remain. Of these 27 goals, 13 deal with performance and participation outcomes we strive for and 14 deal with the 'how' of realising these improvements, in other words actions that need to be taken to strengthen the sector. Twenty-seven goals may seem like many goals, but they are retained as we want to underline how diverse the role players are who contribute towards educational improvement. To promote focus within the system, however, five of the 27 goals remain priority goals. These deal with Grade R, teacher development, learning materials, school management and support by district offices. The five priority goals are indicated by ★★★ in this plan. The 36 indicators of the 2011 Action Plan, which are attached to individual goals, also remain. A few indicators are high priority indicators and are also marked with ★★★.

This plan is shorter than the 200-page Action Plan of 2011. The 2011 document was long as it was the sector's first comprehensive sector plan and it was thus necessary to argue clearly why certain strategies were important, on the basis of existing trends and the available evidence. Moreover, that document served to respond to a variety of concerns that were brought up during the public consultations that led to the 2011 plan. The 2011 Action Plan will continue to serve as an important resource for understanding the challenges and solutions of the schooling sector.

[1] National Planning Commission, 2012.

There are a number of planning documents that guide the basic education sector apart from this one. What they say is essentially the same, but their intended audiences, time horizons and level of detail differ. Other important documents include the following:

- ***National Development Plan 2030: Our future – make it work.*** This plan, released by the President in 2012, is a landmark document that guides the nation. It is based on much research and public consultation. The sections in the plan dealing with education also drew to a large degree from early versions of the 2011 Action Plan. The new Action Plan will continue to be closely aligned to the National Development Plan (NDP).

- ***Medium Term Strategic Framework.*** The MTSF document, produced by Presidency, translates the National Development Plan commitments to actions to be taken during the 2014 to 2019 electoral cycle. In producing the basic education section of the MTSF, Presidency worked closely with the DBE. The MTSF comprises both an over-arching document that covers 14 'priority outcomes', the first of which is basic education, and then also separate detailed documents for each of the 14 priority outcomes[2]. A key purpose of the MTSF is to demonstrate how the 14 outcomes link to each other.

- ***Strategic plan of the DBE 2014-2019***. This plan, which guides each annual plan (or 'Annual Performance Plan') of the DBE, is required by Treasury and is strongly focussed on how the DBE will use its budget to contribute towards progress in the basic education sector. It should be remembered, however, that most spending in this sector is from the budgets of provincial education departments. The provincial departments each have their own five-year strategic plan and annual performance plans. The DBE works hard at ensuring that the annual plans of the ten departments (the DBE and the nine provincial departments) are aligned to each other, to the Action Plan, and to the NDP.

☞ **The NDP on education's role in dealing with the apartheid legacy:**

The education system will play a greater role in building an inclusive society, providing equal opportunities and helping all South Africans to realise their full potential, in particular those previously disadvantaged by apartheid policies, namely black people, women and people with disabilities. (p. 296)

[2] Documents available at http://www.thepresidency-dpme.gov.za/keyfocusareas/outcomesSite/Pages/the-Outcomes-Delivery-Agreements.aspx.

2 Our vision of a post-apartheid schooling system

☞ **The NDP…**

… envisions a South Africa where everyone feels free yet bounded to others; where everyone embraces their full potential, a country where opportunity is determined not by birth, but by ability, education and hard work. (p. 24)

The vision for schools that guides this document is stated below. It is the same vision that informed the 2011 Action Plan.

Making sure that every young South African receives quality schooling is an urgent need. Yet, we realise that this cannot be realised overnight. We need a clear vision of where we want to be in 2030, or even before then if possible. And we must make sure that every year we move a bit closer to our vision, recognising that a large improvement is actually an accumulation of many smaller changes. By 2030 we must see the following in every South African school:

Learners attend school every day and are on time because they want to come to school, the school is accessible and because they know that if they miss school when they should not, some action will be taken. Learners understand the importance of doing their schoolwork, in school and at home, and they know their school will do everything possible to get them to learn what they should. Much learning happens through the use of computers and, from Grade 3 onwards, all learners are computer literate. Part of the reason why learners want to come to school is that they get to meet friends in a safe and secure environment where everyone is respected; they will get a good meal; they know they can depend on their teachers for advice and guidance; and they are able to participate in sporting and cultural activities organised at the school after school hours.

Teachers who received the training they require are continuously improving their capabilities and are confident in their profession. Teachers understand the importance of their profession for the development of the nation and do their utmost to give their learners a good educational start in life. They are, on the whole, satisfied with their jobs because they feel their employer is sensitive to their personal and professional needs and that their pay and conditions of service in general are decent and similar to what one would find in other professions.

The school principal ensures that teaching in the school takes place as it should, according to the national curriculum, and understands his or her role as a leader whose responsibility is to promote harmony, creativity and a sound work ethic within the school community and beyond.

Parents, who are well informed about what happens in the school, are keen to be involved in school affairs and receive regular reports about how well their children perform against clear standards that are shared by all schools. These parents know that if something is not happening as it should in the school, the principal or someone in the department will listen to them and take steps to deal with any problems.

Learning and teaching materials are in abundance and of a high quality. The national **Minimum Schoolbag** policy, which is widely understood, describes the minimum quantity and quality of materials that every learner must have access to. Computers in the school are an important medium through which learners and teachers access information.

School buildings and facilities are spacious, functional, safe and well maintained. Learners, teachers and the school community as a whole look after their buildings and facilities because they take pride in their school.

3 Developments up to 2014 that influence our strategic direction

☞ **The NDP on over-arching 'critical success factors' for national development:**

Focused leadership: "Policy changes should be approached cautiously based on experience and evidence …"

A plan for all: "Broad support across society is needed for … successful implementation … Vigorous debate is essential for building consensus."

Institutional capability: "Institutions improve through continuous learning and incremental steps … This requires good management … high performance … ethics and a willingness to learn from experience."

Willingness to prioritise: "… senior public officials should focus most of their attention on a few strategic priorities." (p. 59)

The public discourse on the schooling sector in South Africa sometimes creates the impression that nothing is changing, that challenges remain unchanged in their size and nature. This is an impression that is not supported by the facts. The system is dynamic. Schools in 2014 were not the same as schools in 2009. Changes have occurred, some very obvious, others more subtle. By far most changes have been in the right direction. Certain changes are large, others less so. Whilst we do need to accelerate change, it must be remembered that certain changes in education systems tend to be slow. The key thing, as indicated in the vision of the previous section, is to ensure that there is continuous improvement and that changes are as large as can be expected. In the end, a large improvement is the accumulation of many smaller changes.

So how was the schooling system in 2014 different to what we had in 2009, and how does this influence our strategies?

Perhaps the most significant news about the system in recent years was the TIMSS[3] 2011 results released at the end of 2012. TIMSS is a widely respected international testing programme aimed largely at assessing whether countries are making educational progress over time. South Africa's participation in TIMSS involved the testing of Grade 9 learners in mathematics and science in 2002 and again in 2011[4]. Our average in mathematics improved over this period from 285 to 352. A similar trend was seen in science. TIMSS scores are benchmarked in such a way that 500 represents the average across all countries in the 1995 run of TIMSS. **The size of South Africa's improvement in the 2002 to 2011 period, around 7 points a year, is about as large as we could hope to achieve.** This is the rate of change that has been seen amongst the fastest improvers in the world[5]. If we continue at this

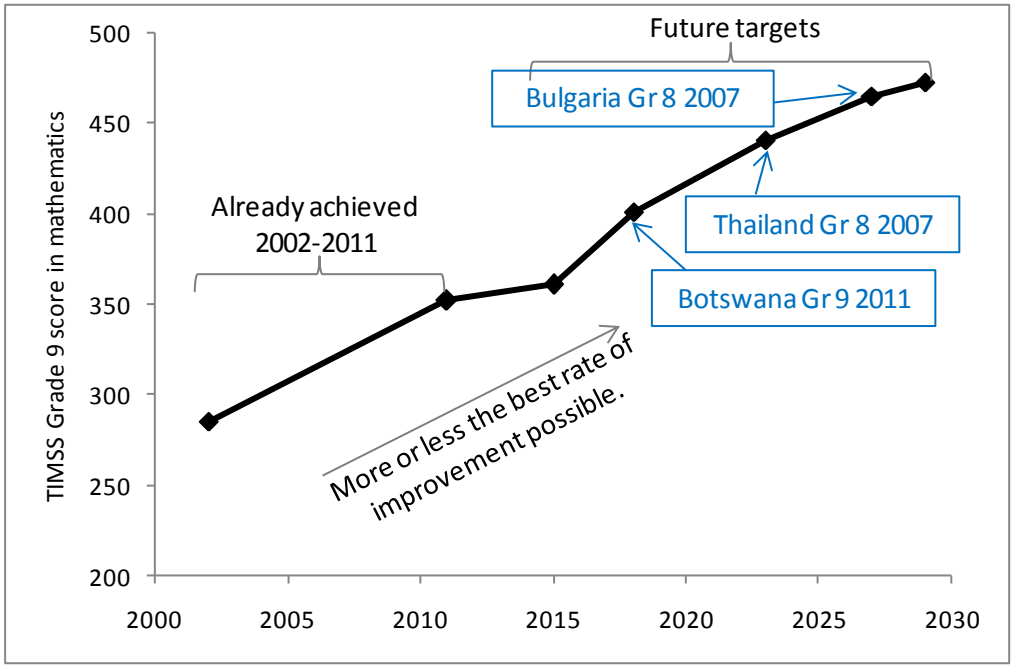
[3] Trends in International Mathematics and Science Study.
[4] In 2002, South Africa tested learners in both grades 8 and 9, and in 2011 only in Grade 9. Details on the comparison between the two years can be found in Reddy, *et al* (2012). The international TIMSS reports (see for instance Mullis *et al*, 2012) refer to a run of TIMSS in 2003, but not 2002. Whilst most TIMSS countries did test learners in 2003, in South Africa testing occurred in the previous year.
[5] DBE, 2013b: 14.

rate, we should be able to achieve the target put forward in the 2011 Action Plan, which was to reach the level of the best developing counties seen in 2009, by around 2023.

The TIMMS trend in South Africa can be seen as more than just a trend for mathematics and science in Grade 9. Such trends do not occur in isolation. They occur because there is improvement in earlier grades as well, and across other subjects such as the languages. A good command of language can be regarded as a prerequisite for effective learning in other non-language subjects.

Not only did South Africa's Grade 9 TIMSS results improve, they improved whilst more learners reached Grade 9. The percentage reaching Grade 9 has improved from around 80% to 85% in the 2002 to 2011 period. Moreover, youths have been reaching Grade 9 at a lower age[6]. In general, it has been more socio-economically disadvantaged youths who have seen their access to education improve. That we should have seen the TIMSS average improve whilst greater numbers of disadvantaged learners were being retained in schools is certainly an achievement we should be proud of. The following graph illustrates South Africa's past and envisaged future educational quality trajectory, in terms of TIMSS mathematics scores.

Envisaged future educational quality trend for South Africa[7]



Is the 2002 to 2011 TIMSS trend described above compatible with evidence from other sources? In SACMEQ[8], the improvement between 2000 and 2007 in Grade 6 mathematics was too small to be considered statistically significant, thus suggesting that there was virtually no quality improvement between 2000 and 2007 in this grade. A possible explanation is that the strong shift towards more structured learning programmes and greater use of textbooks prompted by the Foundations for Learning programme in 2008, influenced learning outcomes in Grade 6 in 2008, and is thus seen in improvements in the Grade 9 results three years later.

[6] DBE, 2013b: 11, 14.
[7] For two countries, Thailand and Bulgaria, historical Grade 8 (not 9) values are quoted as most TIMSS countries test Grade 8. To provide some sense of grade-on-grade differences, in 2002 the difference between South Africa's Grade 8 and Grade 9 mathematics results was 21 TIMSS points.
[8] Southern and Eastern Africa Consortium for Monitoring Educational Quality.

South Africa's participation in TIMSS 2015, again at the Grade 9 level, is set to proceed and provides an important opportunity to test the extent to which the trend seen up to 2011 has been sustained beyond this year. The results from the SACMEQ Grade 6 testing that occurred in 2013, when released, will also assist in understanding the dynamics of the changes under way.

Output at the critical Grade 12 level has improved with respect to a few important indicators. **In particular, the number of Grade 12 graduates with sufficient results to qualify for Bachelors-level studies at university increased from around 110 000 to 151 000 between 2009 and 2014.** The average annual increase for the indicator in this period was 7%, against an increase in the youth population of around just 0.5% a year[9]. This is an encouraging trend given the urgent need for more university graduates in the economy. Yet the trend falls short of the targets set in the 2011 Action Plan. **Other indicators, such as the number of Grade 12 passes in mathematics and physical science, dropped immediately after the transition to the new curriculum in Grade 12 in 2008, as the system learnt to adapt to a new examinations system, but these indicators have subsequently stabilised and are following a sustainable upward trend.** The strong support that has been given to teachers and learners by education departments and others to assist in the improvement of Grade 12 results appear to have paid off. **But for continued improvements, it will be necessary to reap the benefits of better schooling in the lower grades**. **There is a limit to what can be fixed in the final two or three grades of the system.** This is why the positive TIMSS trend is so important. Though the Grade 12 examinations, unlike the TIMSS or Annual National Assessments (ANA) tests, are not specifically intended to measure year-on-year improvement in the system, in particular given the fact that results depend strongly on the subjects that learners choose, the DBE realises that more could be done to use the Grade 12 results to track the quality of education at this level, a matter that is of obvious concern to universities. To this end, the DBE is working with Umalusi to bring about a greater use of anchor items (common questions across years) and other techniques that will facilitate the monitoring of quality.

Recent developments point to a schooling system that is succeeding in improving the quality of learning outcomes, sometimes in line with targets, sometimes below the target levels, depending on what indicator one looks at. This indicates that at least some of government's interventions over the years are making a positive difference. In a system as complex as the schooling system, it is difficult to know exactly how positive change is brought about. **But the fact that movement is in the right direction suggests that in the coming years consolidation of existing initiatives, as opposed to radical change, must be a strategic priority**.

Even if it is not absolutely clear what interventions are contributing how much to educational improvement, likely explanations include a range of bold initiatives that have been taken by government in recent years. In fact, the TIMSS background data reveal a few of the key trends. For instance, the percentage of teachers saying they used a textbook as their main classroom resource for teaching mathematics increased from a worryingly low 30% in 2002 to 70% in 2011. The latter 70% of teachers are concentrated amongst schools serving poorer communities. **This trend reflects increased spending on textbooks and, since 2011, a particularly strong emphasis on providing standardised textbooks and workbooks to all schools.** As emphasised in the 2009 review of curriculum implementation[10], insufficient use of good textbooks had for many years been a reason for poor learning and teaching.

Monitoring of access to learning materials is not something that education systems typically do well, but the DBE has initiated innovative ways of dealing with the problem. It is important to bear in mind that ultimately access to books, in the classroom but also at home,

[9] DBE (2013b) with an analysis of 2013 and 2014 examination results added.
[10] DBE, 2009.

is what is important. Monitoring spending on books and the delivery of books to schools is also important, but success here is not always a guarantee that learners will have access to books. **A 2011 survey of a representative sample of around 2,000 schools, which involved visits to classrooms by fieldworkers and actual counting of books, revealed that there were roughly around 8.5 books, either printed workbooks or textbooks, for every 10 learners in visited classrooms in key subjects. Access to books appears to improving, but should be better.** Achieving this requires a mix of adequate budgets, effective provisioning of books, good year-on-year retrieval systems in schools and appreciation of books amongst learners.

Even before the full-scale introduction of the Annual National Assessments (ANA), there had been an increasing use of standardised testing programmes, either national or provincial. **Whilst it will take some years for ANA to evolve into the world class testing system envisaged in the 2011 Action Plan, even as it evolves it can still play a crucial role in heightening an awareness of standards and core learning competencies amongst teachers, parents and society as a whole. In fact, one would expect to see improvements in learning outcomes as a result of the increasing use of standardised assessments below the Grade 12 level in recent years.** However, it is important that ANA assumes its world class status as soon as possible. Comparability of results across time (years) and space (for instance districts) needs to improve. It is also vital that the information emerging from ANA is appropriately packaged for different users, including parents who need to know what is happening in their schools, those who run in-service training for teachers, and district officials who need to assess the performance of individual schools and school principals. The DBE is working closely with experts within the country and beyond (for instance the World Bank) to ensure that these aims are achieved.

One important area of innovation in government currently is the shift towards more scientific impact evaluation techniques to ensure that as often as possible, the impact of the various interventions we invest in, from teacher development to school nutrition, is measured. Clearly, if interventions are not making a positive contribution towards learning and teaching, we need to rethink these interventions. The Department of Performance Monitoring and Evaluation (DPME) of the Presidency has already completed or initiated a few impact evaluations in the basic education sector whose findings will guide planning in the sector[11].

With regard to curriculum, the schooling system is entering an era of unprecedented stability. This creates opportunities for consolidating work, but also innovating, in areas that depend on curriculum stability, such as teacher development and the writing of educational materials. In 2015, every grade in the schooling system will be subject to essentially the same curriculum and assessment rules as in the previous year. The importance of this becomes clear if one considers that in almost every year between 1998 and 2014, there has been at least one grade which was implementing an important new curriculum document (the exceptions were the years 2009 to 2011). The year 2014 saw the finalisation of the roll-out of the new Curriculum and Assessment Policy Statement (CAPS), which was implemented in grades 7 to 9 and 12 in that year. This signals the end of an important process of ongoing learning and improvement in relation to the school curriculum. **The CAPS enjoy widespread support, largely due to the fact that they put forward the details and examples teachers need, in an accessible language and format.**

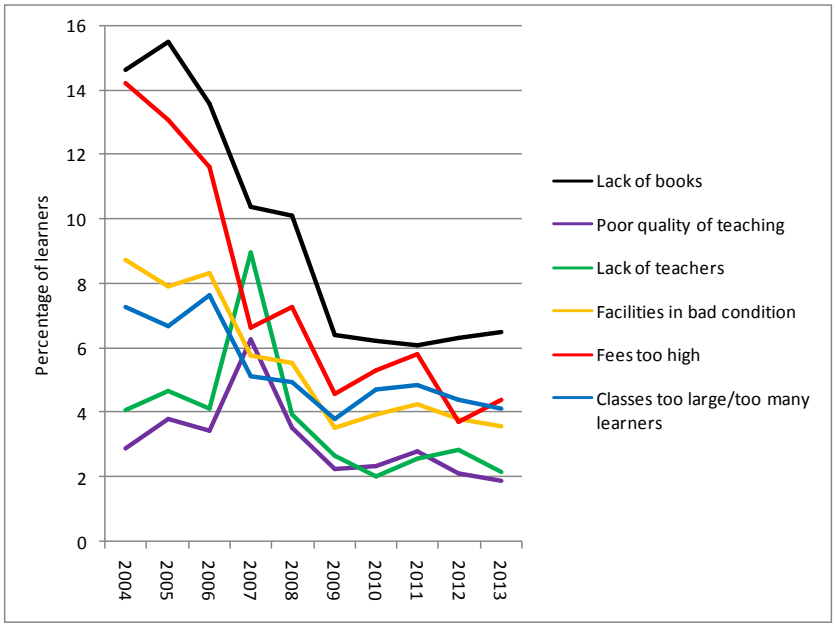
Annual spending on infrastructure has continued to increase. The real inflation-adjusted increase was 85% between 2009 and 2014, counting both provincial department spending and the new DBE spending in this area started in 2012. The way this infrastructure spending occurs is improving as well. Policies on minimum norms have been tightened up. There is

[11] See the *National evaluation plan 2013-14 to 2015-16* on http://www.thepresidency-dpme.gov.za. See also Presidency (2011).

also more transparency, for instance in the form of school-by-school schedules of building work to be undertaken in each financial cycle, published on the web. **Infrastructure backlogs cannot all be resolved immediately, but the budgets and procedures for tackling this challenge are looking healthier than ever before. Yet, as emphasised in the National Development Plan, there are fundamental problems with the way infrastructure development is carried out, which lead to inflated costs. These problems must be resolved if improvements to the physical environment of learners are to be accelerated further.**

An encouraging set of indicators are those relating to the levels of satisfaction amongst South Africa's households when it comes to basic education. Every year since 2004 Stats SA's General Household Survey has asked households what they would complain about when it comes to the education their children. As seen in the following graph, **lack of books has consistently been perceived by households as the largest problem, followed by school fees. Complaints about these two issues have more than halved since 2004. Complaints about poor school infrastructure have also decreased by a similar proportion. These are important trends that those striving for a better schooling system should take credit for.**

Schooling problems according to households



Source: Analysis of General Household Survey datasets of Stats SA.
Note: Household respondents are asked about these problems separately with respect to each learner. More than one complaint can be chosen per learner.

Certain things have not proceeded as planned in recent years. **Many have pointed to weaknesses in the system when it comes to the adoption of new technologies to improve the administration of the schooling system and the teaching and learning process.** This is an inherently difficult area, not just in South Africa. Yet we need to do better if we are to avoid a widening of the gap between South Africa and other countries, even other middle income countries. The area is a difficult one because the evidence is not very clear on, for instance, what information and communications technology (ICT) investments are best for improving learning and teaching. Education principles need to be upheld in face of much 'hype' around what certain products can do and vigorous marketing by suppliers. The case for ICT investments in the area of education administration is a bit more straightforward, though even here the benefits of investments need to be weighed up carefully against costs.

What should concern us is that there is little research on how schools are currently making use of ICTs, and that the little system-wide information we have points to very little growth in access to ICTs amongst learners. For instance, the percentage of learners in a school with a computer centre of any kind has remained just under 40% for many years, and on the whole this 40% is the most socio-economically advantaged part of the system. Stats SA's General Household Survey points to the percentage of learners having access to the internet through their school as still being very low, around 4% in 2011. **Government needs to work more vigorously on partnerships that take certain aspects of e-education forward, or target particular disadvantaged areas. But for more widespread and sustainable development to occur, government and other stakeholders will need to strengthen the research and monitoring capacity in this area, as well as the over-arching policy frameworks.**

National development planning is now on a much better footing than it was just five years ago. This is obviously good for planning in the education sector. **Not only has the National Development Plan, and the process that led up to it, brought important research to the fore and inspired vital debates, it has also underlined how planning ought to occur.** Plans need to bring together a wide range of issues. Budgets and service delivery goals are of course important, but what is also important are cultural and historical considerations, an over-arching framework of economic and social development, a more professional approach within our public institutions and vigilance around the impact of our work on the environment. But it should be emphasised that there are still considerable challenges and bottlenecks in government's planning systems. For this reason, the Presidency initiated an intervention during 2014 to assist the delivery of key services. This initiative, **Operation Phakisa**[12]**, draws from experiences in Malaysia and places a strong emphasis on collaboration and the sharing of skills between various government and non-government stakeholders within South Africa, and contributions from foreign experts**. Education service delivery is a key focus area within Operation Phakisa.

[12] See http://www.operationphakisa.gov.za.

4 Innovation priorities

Though innovation is needed in many areas of the basic education sector, two specific challenges stand out: the Annual National Assessments, or ANA, programme, and e-education. These two areas receive attention in the next two sub-sections.

4.1 Annual National Assessments

Government has repeatedly stated that it is committed towards establishing a world class assessment system for the grades 1 to 9 band at school which will provide the nation with reliable information on progress with respect to what learners learn, but which will also offer practical tools to help educators and parents focus on the right things. The NDP underlines the centrality of ANA for many of the changes we wish to see in education. Many would argue that ANA has already succeeded in shifting the culture in the schooling system towards a stronger focus on learning outcomes. Yet experience in other countries has shown that achieving a world class assessment system takes several years.

The Action Plan of 2011 explained the origins of the ANA programme in the sample-based Systemic Evaluation programme first implemented in 2001. Since 2011, ANA has involved the testing of all learners in grades 1 to 6, with the scope expanding to Grade 9 in 2012, and grades 7 and 8 in 2014. In 2011, 2013 and 2014, the sample-based 'verification ANA' was also run. The 2013 and 2014 verification exercises covered all the grades covered in 'universal ANA'. Since 2011, the release each year of the national report on ANA results has been a major event in the education calendar that has sparked considerable debate about the quality of schooling.

During 2013, important external evaluations were made of the ANA programme, at the request of the DBE, with a view to strengthening the programme. On the one hand, an advisory committee of external experts, led by Dr Anil Kanjee, a South African assessment expert with extensive experience inside and outside the country, and including two experts from the United States National Science Council, with in-depth knowledge of the US national assessment system, NAEP[13], provided valuable advice. Moreover, as part a wider partnership between the South African government and the World Bank, experts from the latter with experience in assessment systems in various developing countries, made recommendations for improving ANA.

Both the advisory committee and the World Bank supported having a two-tier approach, but recommended a stronger separation between the two levels, with universal ANA being more focussed on changing practices in schools and classrooms, and 'verification ANA' better focussed on producing performance information that is comparable over time and across provinces. In fact, 'verification ANA' may be an inappropriate name for the latter.

Best practices in other countries have demonstrated that comparable statistics on language and mathematics performance over time need to be obtained through a sample-based testing system, in our case 'verification ANA', as it is only within a limited exercise such as this that it is possible to achieve the required rigour and levels of reliability. To illustrate, the most respected national measure of progress in learning outcomes in the United States is the NAEP programme, which tests a representative sample of just 9 000 learners per targeted grade.

The external experts have warned against attempting to cover too many grades too frequently with 'verification ANA', but have recommended that the testing that does occur should be more rigorous than what is currently the case. A strong focus on key grades, in particular grades 3, 6 and 9, which are all the end points of three-year curriculum phases, is important.

[13] National Assessment of Educational Progress.

Tests need to be 'secure', in other words not freely available to the public. This is necessary because some questions, called 'anchor items', need to be the same from one year to the next, so that proper comparisons across years can be made. If test questions are publicly known, teachers are likely to drill these questions with learners. The 'verification ANA' and universal ANA tests need to be different, even if they are focussing on the same competencies. Ideally, 'verification ANA' results need to be adjusted after the marking process using approaches that follow item response theory (IRT), as is done in SACMEQ[14] and TIMSS[15], to improve comparability. Techniques such as secure anchor items and IRT scoring are still quite new to the South African education system, but they are necessary given how difficult it is for even the most capable educators to set different tests which are of equal difficulty. Tests need to be at least partly similar, through the use of anchor items, and even then, adjustments in the scores will still be needed. How the process unfolds, from the test design stage to the determination of final scores, needs to be quality-assured by a range of experts, and technical details need to be made public for the resultant performance statistics to enjoy credibility.

The external experts moreover emphasised the importance of maintaining a critical level of independence in the management of the sample-based 'verification ANA' testing and noted that the use of external service providers for the sample-based collections of 2011, 2013 and 2014 was a positive feature.

The advice received by the DBE points to the importance of balancing two needs in the design of the ANA tests: the need to gauge how well learners perform relative to the curriculum of their current grade, and the need to gauge how far behind worse performing learners are. Difficulties relating to the fact that curricula, in particular in developing countries, set standards which are often well above what most learners will cope with in a specific grade, are increasingly being acknowledged by researchers. Tests need to include more 'easy items' so that teachers and researchers can obtain a better idea of exactly what obstacles are faced by learners who are behind in the learning process.

Whilst a key purpose of 'verification ANA' must be to input reliable information into the national education debates, the main purpose of universal ANA should be to assist teachers, parents and school and district managers to understand their teaching and learning challenges better, and to identify what remedial steps to take. One criticism often heard is that there has not been a sufficiently clear statement by the DBE on how school and district staff should use ANA, and how ANA links up to other initiatives such as the national workbooks. What is clearly needed are more user-friendly guides for schools, as well as reports that use the data collected from universal ANA to inform individual districts and schools of where their key challenges lie. At the same time, it has been emphasised that it would be dangerous to make universal ANA a high stakes process, attached to rewards and punitive action, whilst ANA is still relatively new. Countries that have, for instance, attached incentives to their testing systems have done so after many years of allowing the testing system to mature and become respected as a fair measure of performance.

In moving forward, the DBE envisages a number of ANA milestones, based on lessons learnt and careful consideration of the advice received from external advisors and stakeholders. **One priority is to produce a clear policy statement on the basic logic of ANA, including its intended use by teachers, parents and others at the school and district level.** Test design processes need to become more rigorous. **Concretely, the DBE will ensure that starting in 2015, 'verification ANA' tests will be secure and include anchor items.** This will allow for better comparison of results over time, and across provinces. **Adjustment of results using item response theory will moreover be explored, beginning in 2016. In 2015, the DBE will generate district-level ANA reports**, using universal ANA data, as one important step

[14] Southern and Eastern Africa Consortium for Monitoring Educational Quality.
[15] Trends in International Mathematics and Science Study.

towards better use of ANA at the district and school levels. Finally, the DBE will continue to engage with a range of experts on the optimal approaches to take in ANA and will moreover **evaluate ANA on a regular basis through feedback from teachers, parents and other stakeholders at the school and district levels**.

4.2 e-Education

e-Education is considered one of two key areas of innovation for the basic education sector for a number of reasons. e-Education can involve changing the way schooling occurs in rather fundamental ways, modern information and communication technologies (ICTs) have the potential to improve and diversify learning to a large degree and, finally, ICTs are becoming so widely used in society that an education without them is rapidly becoming an incomplete education. As emphasised in the 2011 Action Plan, e-education for just a privileged minority can exacerbate future inequalities in South African society through the so-called 'digital divide'.

☞ The NDP on the importance of broadband in schools:

… the most crucial enabler of ICT [in schools] is high-speed broadband. (p. 303)

The NDP emphasises how important it is for the state to be pro-active in advancing ICTs amongst all South Africans and thus combating the digital divide. But the NDP also emphasises how important it is for state interventions to be carefully designed. Opportunities have been lost in the past due to poor intervention design and as a result South Africa has to some extent fallen behind comparable countries[16]. Good policy frameworks are needed. Here an important step forward was the release of the 2014 Green Paper on ICTs by the Department of Communications[17]. Progress in e-education is clearly dependent on favourable prices and a good ICT infrastructure in the country as a whole.

There was a slightly better picture in 2014 with respect to ICTs in schools, compared to when the 2011 Action Plan was released. Yet it should be cause for concern that our knowledge of the fairly fragmented yet substantial e-education landscape as it currently exists remains limited. The 2011 TIMSS[18] data confirm that over the past decade or so access to computers in schools improved substantially. In 2011, 49% of Grade 9 learners had access to computers in schools, against 28% in 2002. However, the same TIMSS data reveal that South Africa was in 2011 considerably behind other developing countries, if one compares our 49% to Botswana's 86%, Ghana's 78% and Indonesia's 82% (all 2011 figures)[19]. Access to the internet in schools remains fairly low, at around 9% of learners in 2013, according to the General Household Survey, which since 2009 has tracked household access to the internet through education institutions[20].

At the secondary level, one can expect the number of schools offering the two subjects computer applications technology and information technology to reflect, to a fairly large degree, capacity of schools to take steps towards more e-education in general. Here progress since 2008 has not been good, with the percentage of schools participating in examinations in these two subjects at the Grade 12 level remaining at around 24%. However, one province,

[16] National Planning Commission, 2012: 190.
[17] Government Notice 44 of 2014.
[18] Trends in International Mathematics and Science Study.
[19] Calculated from the 2011 TIMSS data available at http://timss.bc.edu.
[20] The GHS does not differentiate between schools and other education institutions. However, when only households with learners in schools but not students in other institutions, such as universities, are considered, the figure remains around 9%.

Free State, stands out as a success story that the country as a whole could learn from. In Free State, the percentage of public schools offering Grade 12 and either (or both) of the subjects in question increased from 42% to 56% between 2008 and 2012, thanks largely to efforts by the provincial department to establish computer centres in schools. As a result, 56 historically disadvantaged schools started entering students in ICT-oriented Grade 12 examination subjects. In Limpopo, on the other hand, a worrying situation still prevailed where in 2013 only around 6% of public schools with Grade 12 offered one or two of the computer subjects in question, against a figure of 29% for the rest of the country.

As explained in the 2004 White Paper on e-education[21], e-education includes the use of modern ICTs for better education administration. In this regard, the 2013 report *Success by numbers*[22], the outcome of a joint initiative between the DBE and private sector partners, and based partly on interviews conducted by experts with over 300 people working at the various levels of the schooling system, represents a milestone towards understanding how information and ICTs can contribute towards better system administration. The findings and recommendations of this report are also discussed under Goal 27 in the current plan. On the positive side, the report acknowledges the strong commitment within the system to the use of data to bring about effective management. However, fundamental problems include a widespread culture of unquestioning compliance in many parts of the system, which results in a situation where managers devote a large amount of effort to completing forms and submitting data with little understanding of what the data are used for, or how the effort contributes towards better schooling. This situation leads to data that are often of a poor quality. More consideration of how data will be used, and insistence that data should result in reports that can assist managers at all levels of the system, are needed for e-education progress to be realised. For instance, school principals should, in return for data they submit, receive reports that allow the school community to see how well or poorly the school performs within the district against key indicators. The limited capacity of managers and planners to prioritise represents a further fundamental problem, according to the report. Too many priorities, each linked to complex reporting procedures, are likely to overload the system. As demonstrated by the current plan, and the technical documentation that accompanies it, getting just one indicator right can involve considerable technical work. Clearly, indicators need to be chosen carefully and the number of indicators needs to be limited.

The DBE will, during 2015, release a draft national strategy on e-education for the schooling sector for consideration by the large range of e-education stakeholders in the country. Whilst the 2004 White Paper remains a key guiding document, there remain important gaps, partly because ICTs evolve rapidly over time. Below, four key strategic areas where informed policy guidance is needed for success in e-education are briefly discussed.

Firstly, strategy needs to draw a clear link between greater use of ICTs and achieving the learning improvement goals established by the system. It is easy for the 'hype' generated around ICTs, much of it by vendors, to lead to the mistaken belief that computers and the internet will automatically lead to, for instance, better reading and numeracy skills. Good impact evaluations on past ICT interventions are scarce, but where they exist, they suggest that system-wide interventions in contexts of poverty and weak management need to proceed with much caution, and with effective monitoring of what actually changes 'on the ground'[23]. There are reasons to be hopeful about the impact of ICTs on learning outcomes, but improved access to ICTs must be linked to other elements of school improvement.

[21] Government Notice 1922 of 2004.
[22] Michael and Susan Dell Foundation, 2013.
[23] For a rare example of an impact evaluation of ICTs on schooling in a developing country context, see Cristia *et al* (2012).

Secondly, strategy must be clear on what the available technologies are, and needs to demystify these. It is clear that difficult technology choices need to be made at the national and provincial levels, and these need to be guided by issues such as relative costs, including 'hidden' costs associated with human capacity and sustainability. South Africa should also make use of the opportunity to learn from other countries, in particular developing countries, which are a few years ahead of us in the area of e-education[24]. One thing that experiences elsewhere clearly show is that whilst relatively small-scale projects involving public-private partnerships have been vital for initiating the e-education journey, system-wide investments and regulations are necessary if e-education is to move beyond being 'too little, too expensive, and poorly managed'[25]. Specifically, guidance is needed on the migration from no ICTs in a school, to the use of computer centres (also referred to as 'cyberlabs'), to one-to-one situations where all learners have access to their own device. One thing that makes system-wide projects difficult is that these migrations typically bring about temporary inequities as it is impossible to equip all schools simultaneously. Policy needs to clarify how such temporary inequities are justified within the sector's overall emphasis on an equitable schooling system. Guidance is also needed on standards of internet speed for schools. As emphasised by the 2014 Green Paper on ICTs of the Department of Communication, improving access to the internet in schools needs to be driven partly by demand, which in turn is driven by the quality and quantity of educational materials available online. Guidance is also needed on the complex migration to the greater use of free and open source software (FOSS), something that is prioritised in government policy[26].

Thirdly, e-education involves many players inside and outside government. Strategy needs to be clear on who these players are, and how they collaborate. A structure such as the Ministerial e-Education Advisory Council proposed by the 2004 White Paper is still needed. The Department of Communications is clearly key insofar as it establishes ICT standards for the country as a whole. There is room for the basic and higher education sectors to work more closely together on securing adequate broadband connectivity for all education institutions. Guidance is needed to ensure that educational materials developed with public funds, or through public-private partnerships, are freely available online. Schools that have experience in the use of ICTs have established associations which can offer valuable advice on what works best. Even with the introduction of system-wide e-education initiatives, localised public-private partnerships to strengthen ICT use should continue to be encouraged, partly because these partnerships can teach the system valuable lessons. How lessons emerging from these partnerships can be more widely disseminated, but also how schools can be advised on how to enter into beneficial partnerships, need to be made clear.

Finally, it is clear that strategy and planning need to be guided by much better information on the current shape and size of e-education in schools, and on whether existing initiatives are having the intended results. UNESCO's 2009 guide on monitoring e-education progress in schools creates an excellent point of departure for establishing a South African monitoring and evaluation framework[27]. International experience shows that apart from more objective measures of progress relating to, for instance, ratios of learners to computers, it is also important to gather opinions from samples of schools on how they experience new e-education initiatives.

[24] For a good example of a report on progress and challenges in a country widely cited as a success story, namely Uruguay, see Fullan *et al* (2013).
[25] Farrell and Isaacs, 2007: 3.
[26] *Policy on free and open source software use for South African government* of 2006, available at http://www.gov.za.
[27] UNESCO: UIS, 2009.

5 Output goals that look at learning outcomes and coverage (Goals 1 to 13)

Goals 1 to 13 deal with specific outcomes of the schooling system, both outcomes relating to enrolment and attainment, and outcomes relating to what learners learn. Amongst the latter, one can distinguish between average performance, or marks, and the proportion of learners surpassing critical thresholds.

Goals and indicators marked with ★★★ are of an especially high priority.

5.1 Goals 1 to 6: Meeting minimum educational standards

Goals 1 to 6 deal with the number or percentage of learners reaching specific standards.

Goal 1	Increase the number of learners in Grade 3 who, by the end of the year, have mastered the minimum language and numeracy competencies for Grade 3.

As argued in the 2012 report of the DBE's newly established National Education Evaluation and Development Unit (NEEDU)[28], improving the generally very low levels of language and mathematics competencies reached in the Foundation Phase (grades R to 3) requires both fixing the overall functionality of the school, and running interventions aimed at changing teaching practices in the classroom. It is not enough to do just the one. This underlines the inter-connectedness of the various actions described under the goals of this plan.

The NEEDU report points to the fact that although the availability of books has improved in the Foundation Phase, largely through the national workbooks initiative discussed under Goal 19, the shortage or absence of a sufficient variety of reading materials, for instance in the form of graded readers, remains a concern. The Curriculum and Assessment Policy Statement (CAPS), introduced in the Foundation Phase in 2012, has made what teachers need to do much clearer, according to the NEEDU report. However, the NEEDU report also recommends a few additional specifications for teachers, specifically very simple level of effort and performance norms such as the requirement that learners write a specific number of pages per week, or that some assessment of reading should occur using simple speed norms, expressed in words per minute.

The NEEDU report, as well as a special DBE audit of provincial reading improvement interventions, found a worrying tendency for provinces to have official strategies on paper, which were barely known in schools. Only in two or three provinces is there a clear presence within schools of provincially driven strategies to improve language and mathematics outcomes at the Foundation Phase. In response, the DBE has adopted to a more pro-active approach to ensure that all provinces learn from best practices. The NEEDU report moreover emphasised the need for a stronger evaluation culture to test the effectiveness of existing strategies, and for a stronger national focus on developing the required evaluation instruments. For instance, there is a need to adapt tools such as the early grade reading assessments (EGRA) so that they better reflect the structure of our African languages[29].

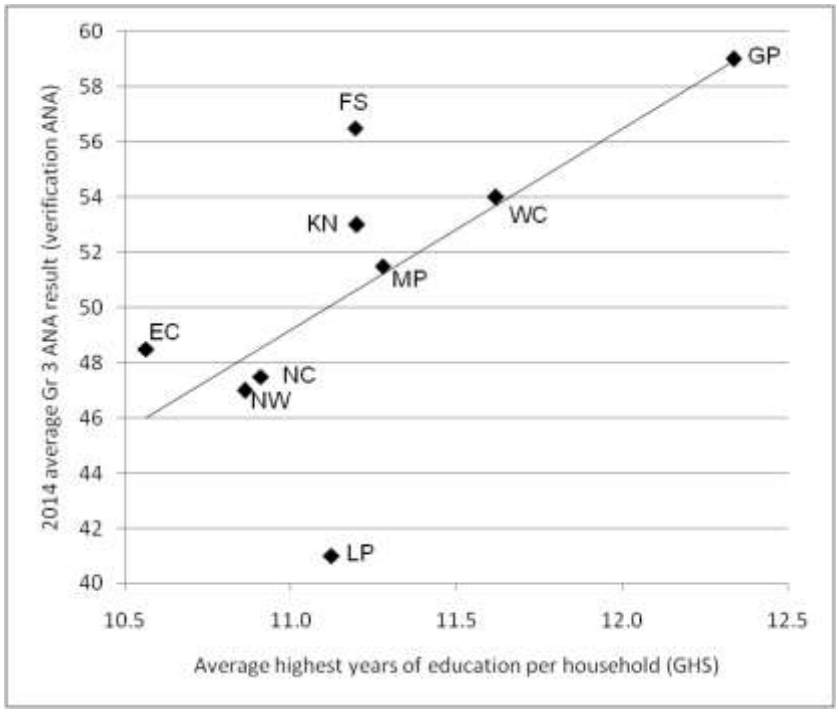
[28] See DBE (2013c). See Goal 16 for further details in this report.
[29] See https://www.eddataglobal.org/reading/index.cfm?fuseaction=pubDetail&ID=215 for an example of the EGRA instrument for isiZulu. For a description of the use of the EGRA instrument, see for instance Ralaingita and Wetterberg (2011).

★★★ ***Indicator 1.1. Percentage of Grade 3 learners performing at the required* literacy *level according to the country's Annual National Assessments.***

Indicator 1.2. Percentage of Grade 3 learners performing at the required* numeracy *level according to the country's Annual National Assessments.

The 2014 values for the above two indicators, 57% and 56% respectively, were obtained from 'verification ANA' and confirm the seriousness of the problem with under-performance even at the earliest grades. The rankings of provinces with respect to the two indicators remain basically as they have appeared in earlier assessment exercises, with Western Cape, Gauteng, KwaZulu-Natal and Free State performing relatively well, and Limpopo displaying relatively poor results. As discussed in the DBE's 2013 progress report on the sector[30], this ranking is partly to be expected insofar as learners from poorer households typically experience greater barriers to learning and different provinces have different poverty burdens. However, what is telling is that there is a general pattern whereby similarly poor or disadvantaged learners perform better in certain provinces than others and we can expect this to be a reflection of better service delivery. This is confirmed in the following graph, which shows for instance that though learners in Mpumalanga enjoy as much household support, in the form of educated adults, as Free State or KwaZulu-Natal, Mpumalanga's Grade 3 ANA results (the average for the mean scores across the two subjects) were worse than those in the other two provinces.

Grade 3 ANA results and household circumstances



The official ANA reports confirms that the ANA programme has not reached the stage of maturity at which we can be certain about year-on-year improvements. To quote the 2013 ANA report[31], 'no technically defensible comparisons can be made on the results of ANA 2013 to those of previous years although the results of each year are valuable for the year under review.' Similarly, the 2014 ANA[32] report explains: 'The fact that ANA tests are

[30] DBE, 2013b: 30.
[31] DBE, 2013d: 7.
[32] DBE, 2014c: 37.

exposed necessitates that a different test is administered every year. This makes it difficult to compare performance from year to year because different tests are likely to yield different results'. It is also worth noting that several of the increases and decreases seen in the provincial ANA results are larger than what one is likely to find in any schooling system[33]. Programmes such as ANA in other countries have typically taken several years to mature. This should not detract from the importance of the process of this kind of programme, which even if not a perfect measurement tool helps schools to focus on the quality of learning and teaching. The DBE's plans for improving the accuracy of the ANA results, whilst preserving the benefits of the ANA process within the school, were summarised in section 4.1.

Goal 2	Increase the number of learners in Grade 6 who, by the end of the year, have mastered the minimum language and mathematics competencies for Grade 6.

With respect to this goal, the Annual National Assessments (ANA) focus on mathematics and the languages English and, for around 11% of learners in the Intermediate Phase[34], Afrikaans. These two languages are critical insofar as they are still the only languages used in the non-language subject examinations at the end of Grade 12.

Whilst the general pattern up to Grade 3 is for language and mathematics results to be fairly similar, from the Intermediate Phase onwards mathematics results tend to be considerably lower than language results, as seen in the 2014 national values for the two indicators under this goal: 46% of Grade 6 learners pass the language test, against 32% for mathematics. This is partly due to demands being high in mathematics. The international SACMEQ tests, which focus on Grade 6, reveal that South Africa's ratio of mathematics to language performance is in line with what is found elsewhere.

Since 2012, the English and Afrikaans tests in ANA have each had home language (HL) and first additional language (FAL) versions, meaning the tests have been brought in line with the curriculum. In Grade 6, around 66% of learners take the English FAL test, 22% take English HL, 10% Afrikaans HL and 1% Afrikaans FAL. The fact that home language learners are more likely to pass the test than FAL learners should be seen against the fact that home language learners tend to come from more socio-economically advantaged backgrounds and thus enjoy more educational support in the home.

Since 2012, a key outcome of the ANA process has been a diagnostic report produced by education experts, where they illustrate typical learning problems seen in a reduced random sample of test scripts, and suggest approaches teachers should take to remedy these problems. For instance, the 2013 diagnostic report, hard copies of which have been sent to all schools, indicated that Intermediate Phase learners still frequently fail to think in abstract terms, as reflected in 'count marks' written on scripts. In English FAL, the tests reveal too many learners have a vocabulary that is too small. Building a larger vocabulary is relatively simple to achieve through specific classroom exercises and clearly many teachers should pay more attention to this.

An important shift in 2013, with the introduction of the new Curriculum and Assessment Policy Statement (CAPS) in the Intermediate Phase, was an increase in the weekly time allocation for the fundamental subjects mathematics and languages. By reducing the number of subjects in the Intermediate Phase from nine to six, and extending the total classroom

[33] Specifically, apparent movements up or down that exceed 0.08 standard deviations are not likely to be true.
[34] Grades 4 to 6.

contact time by one hour, it has been possible to increase the mathematics time allocation from 5 to 6 hours, and the overall time devoted to languages (home language and first additional language combined) from 7 to 11 hours. In the CAPS, first additional language (English for most learners) is allocated 5 hours per week.

★★★ ***Indicator 2.1. Percentage of Grade 6 learners performing at the required* language *level according to the country's Annual National Assessments.***

Indicator 2.2. Percentage of Grade 6 learners performing at the required* mathematics *level according to the country's Annual National Assessments.

The 2014 values for the above two indicators, 46% and 32% respectively, were obtained from 'verification ANA' and confirm the seriousness of the problem of under-performance in the Intermediate Phase. The language statistic of 46% is a weighted average of the home language average pass statistic of 75% and the first additional language average of 36%. See the discussion under the previous goal relating to measurement issues in ANA.

Goal 3	Increase the number of learners in Grade 9 who, by the end of the year, have mastered the minimum language and mathematics competencies for Grade 9.

The extension of the Annual National Assessments (ANA) programme to all Grade 9 learners in 2012 was an important milestone for the sector. For the first time, it became possible to compare educational outcomes across, for instance, provinces and poverty quintiles, at the Grade 9 level. Though the Grade 9 ANA does not result in a certificate for learners, this remains an option, for instance to facilitate the placement of learners wishing to move from Grade 9 to a further education and training (FET) college. Problems in the movement of learners from schools to colleges persist in the sense that in 2012, only 1% of new students at FET colleges were Grade 9 graduates. The other 99% had completed grades 10, 11 or 12 at school. Yet officially the ideal entrance qualification for students entering FET colleges is Grade 9.

What the Grade 9 ANA has succeeded in doing, however, is to provide a better basis for deciding what subjects learners should take in grades 10 to 12 at school, for instance whether learners are equipped to take mathematics, or whether they should take mathematical literacy.

The 2012 to 2014 ANA results showed that Grade 9 performance in language (English or Afrikaans) and mathematics was well below expectations. However, as argued below, expectations in the Grade 9 ANA mathematics tests seem high by international standards if one considers that a more favourable picture emerges if one uses South Africa's TIMSS[35] data, and TIMSS performance benchmarks. The poor Grade 9 ANA results in mathematics led to a review of the tests themselves to ascertain their appropriateness. An independent review by the Association for Mathematics Education of South Africa (AMESA) concluded in 2013 that test questions used in 2012 were in fact appropriate[36].

Pressure to improve Grade 9 learning outcomes should be seen in conjunction with the simultaneous need to ensure that all children complete Grade 9. Grade attainment has been improving, for instance the percentage of children completing Grade 9 at some point in time increased from 88% to 90% between 2010 and 2013. However, this trend should be accelerated.

[35] Trends in International Mathematics and Science Study.
[36] See report at http://www.amesa.org.za/AMESA_Gr_9_ANA_report.pdf.

★★★ ***Indicator 3.1. Percentage of Grade 9 learners performing at the required* language *level according to the country's Annual National Assessments.***

Indicator 3.2. Percentage of Grade 9 learners performing at the required* mathematics *level according to the country's Annual National Assessments.

The 2014 values for the above two indicators, 22% and 3% respectively, were obtained from 'verification ANA' and are indicative of the problem of under-performance in the senior phase. However, it should be kept in mind that the standard set in the Grade 9 mathematics test in ANA is relatively high, something that becomes apparent if one looks at the TIMSS results. The 2003 wave of TIMSS found that 6% of South Africa's Grade 8 learners achieved at an 'intermediate international benchmark' whilst 10% achieved at a 'low international benchmark'. These figures are considerably higher than the 3% figure emerging from ANA. The corresponding figures for South Africa's TIMSS Grade 9 results (which are available for 2002 and 2011) are difficult to interpret as one is using a Grade 8 benchmark for Grade 9 learners, but what is clear is that achievement of particular benchmarks has improved over time, off a low base. For instance, the percentage of Grade 9 learners attaining the low (Grade 8) benchmark of TIMSS moved from 6% to 15% between 2003 and 2011. The level of Grade 9 mathematics achievement is undoubtedly low in South Africa, but ANA could have over-stated the problem. This is not surprising, given the newness of ANA in Grade 9. See the discussion in section 4.1 on ongoing improvements in the ANA methodology.

Goal 4	Increase the number of Grade 12 learners who become eligible for a Bachelors programme at a university.

Attainment of a Bachelors-level pass in Grade 12, in the pre-2008 system referred to as attainment of a 'matric exemption', is an important goal for many students. Whilst the lower level of attainment that permits studies at the Diploma level still permits a learner to study at a university, it is only with a Bachelors-level pass that access to the full range of university studies becomes possible, subject to further possible requirements that specific faculties at universities may impose. In many ways, the numbers of youths achieving a Bachelors-level pass is more important for national development than the number of youths achieving a simple pass, or the National Senior Certificate. This is implicit in the NDP, with its emphasis on expanding the post-school sector and specifically Bachelors and post-graduate enrolments at universities.

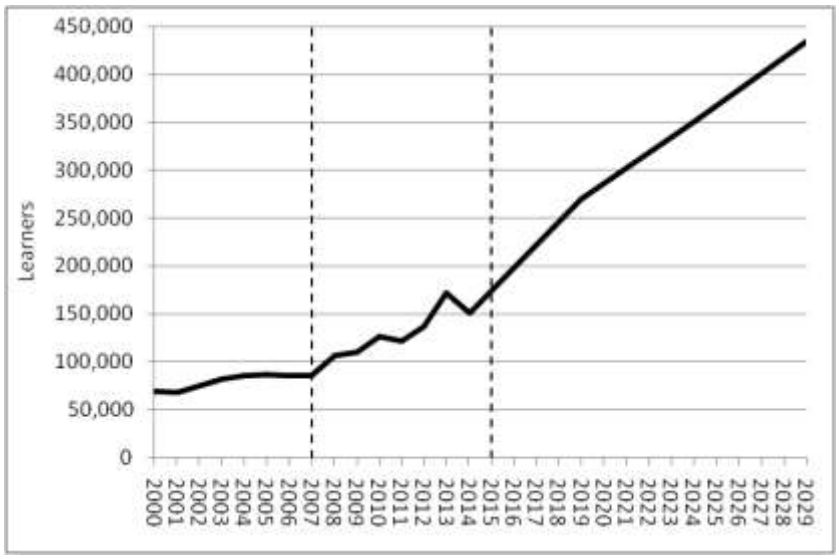
Achieving a Bachelors-level pass requires a learner to obtain a minimum of 50% in all of the four non-language subjects taken, with the further requirement that the four subjects should be from a set of more academically-oriented subjects (for instance, the subject computer applications technology is not included in the set, whilst the more academic subject information technology is). The 2014 report of a Ministerial task team (discussed further under Goal 13) has recommended that the requirements for a Bachelors level pass should be made even more stringent. This recommendation is being carefully considered. Yet it should be kept in mind that achieving a Bachelors level pass is only a first hurdle for students, given that universities are increasingly imposing additional academic hurdles specific to certain areas of study.

★★★ ***Indicator 4. Number of Grade 12 learners who become eligible for a Bachelors programme in the public national examinations.***

As explained in section 3, the value for this indicator has increased substantially, from around 110 000 to 151 000 between 2009 and 2014, and in 2014 fell short of the national target set in

the 2011 Action Plan by 24 000 learners, or 14%. The 2014 value was nonetheless the highest value for this indicator seen since 2000, if one discounts the exceptionally high 2013 value of around 172 000. Despite the fact that the 2014 target was not met, the strong upward trajectory over the longer term encouraging, given the need for substantial increases in university enrolments expressed in the 2013 White Paper on post-school education. The following graph illustrates the long-term improvement that has occurred with respect to this indicator since 2000, when the number of Bachelors-level passes was less than half of what it became in 2014. The graph also illustrates future targets. These targets have been adjusted upwards, relative to the 2011 Action Plan, to cater for new and ambitious targets for university enrolments set in the NDP. (The two vertical broken lines refer to the last year of the previous curriculum and the first year where a target value is used.)

Grade 12 Bachelors level passes



The exceptionally high values for this indicator, and for other Grade 12 examinations indicators, seen in 2013 raise important questions. What is clear is that the number of examination candidates rose sharply in this year, by 10% between 2012 and 2013. Moreover, the percentage of examination-takers who achieved a pass and a pass at the Bachelors level also rose. There were thus two factors at play, more candidates and higher levels of achievement amongst candidates. Why these two trends should have been so exceptional in 2013 is still a matter for analysis, but what is clear is that the 2014 figures display an improvement relative to 2012, and relative to earlier years. Not only is the 2014 figure for Bachelors level passes higher than in 2012 or any previous year, the same can be said for the number of NSC passes in general. Closer analysis of the 2012 and 2013 examinations data reveals that a large increase in the number of younger examination candidates aged 16 at the start of the year (so they turned 17 in 2012 or 2013) accounts for most of the overall increase in the 2013 candidates.

Goal 5	Increase the number of Grade 12 learners who pass *mathematics*.

As discussed below in the box dealing with indicator values, progress with respect to this goal should have been better. However, building teacher capabilities in the teaching of mathematics and translating this into better learner competencies is necessarily a gradual process. Moreover, the introduction of the new CAPS curriculum provisions in Grade 12 during 2014 brought new topics into the Grade 12 mathematics syllabus, creating challenges

which had not existed previously[37]. There is no reason to doubt that efforts in recent years to strengthen mathematics will yield results in future years, in particular considering the improvement seen in Grade 9 mathematics according to TIMSS. However, the emphasis needs to be not just on increasing the number of Grade 12 mathematics passes, but also on increasing the number of learners with high mathematics marks. In response to this need, in 2013 the official Grade 12 examinations report included for the first time details on mathematics distinctions, or learners achieving a mark of 80% or above.

Greater success in mathematics in Grade 12 is obviously dependent on many of the interventions, current and planned, described throughout this document and targeting all the school grades. A good foundation before Grade 12 is clearly crucial, yet for various reasons 'last minute' interventions in Grade 12 will continue to warrant considerable attention as learners prepare for their examinations. 'Matric camps' offering additional classes for learners, often organised by government in partnership with universities and NGOs, have become more common and better organised in recent years, and feedback from stakeholders has tended to be very positive. Another intervention in recent years that has been widely welcomed was the distribution of the newly developed Siyavula mathematics textbooks to all grades 10 to 12 learners in 2012, and continued distribution during subsequent years. The innovative production process for these books has succeeded in making them freely downloadable online, has reduced the unit cost of printed copies by around 75% relative to regular textbooks and has ensured content of a high standard. The books were produced by the DBE in partnership with a number of organisations and companies, including the Shuttleworth Foundation[38]. In a few provinces, the decision has been taken to let the Siyavula books replace regular textbooks.

In 2014 a Ministerial task team established to look into an updated 'MST' (mathematics, science and technology) strategy for the country made its report public[39]. The new strategy, to be released in 2015, will prioritise the following: the establishment of a national office to champion MST in schools and bring greater coherence to the planning of MST; stronger partnerships between the various stakeholders, including universities; a greater use of e-education to promote MST development; consolidating and re-orienting certain aspects of the longstanding Dinaledi school intervention programme; and strengthening the design and use of the diagnostic reports that the DBE has been producing following each Grade 12 examination[40] (these reports are similar to the ANA reports discussed under Goal 2).

Clearly, all efforts to strengthen mathematics must pay special attention to overcoming the devastating legacy of apartheid which, despite improvements over the years, is still evident in facts such as that only 46% of learners with mathematics distinctions in the 2013 Grade 12 examinations were black African, though 83% of all examination candidates were from this population group.

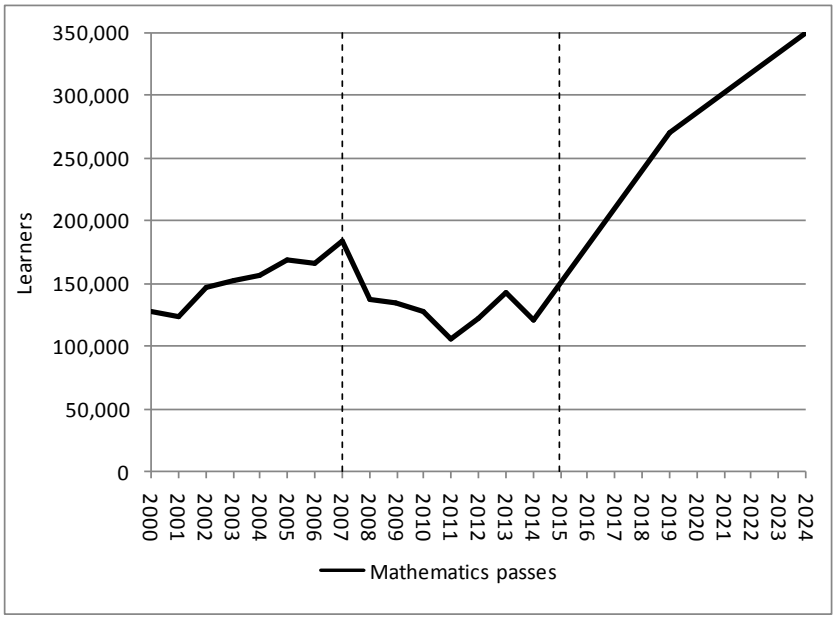
Indicator 5. Number of Grade 12 learners passing mathematics.

Despite improvements in the number of learners qualifying for university entrance (see the previous indicator), it must be noted that this has not been accompanied by a similarly large improvement in the number of Grade 12 mathematics passes in general, or passes at a high level. However, the downward trend in the number of mathematics passes after the

[37] Specifically, Euclidean geometry was examined for the first time in Grade 12 in 2014.
[38] For further details see http://www.siyavula.com.
[39] See report titled *Investigation into the implementation of maths, science and technology* on the DBE website. The outgoing MST strategy is from 2001 and is titled *National strategy for mathematics, science and technology education in general and further education and training.*
[40] See for instance the 2013 *National Senior Certificate examination: National diagnostic report* available on the DBE website.

introduction of Revised National Curriculum Statement in Grade 12 in 2008, as the system adjusted to the new curriculum, has been reversed and the current trend is more or less in line with the future targets set in the 2011 Action Plan, and maintained in the current plan (see graph below). However, the number of very good passes remains worryingly low. For example, in 2014 the number of mathematics distinctions, or mathematics passes achieving at least 80%, was 7 216 which, though an improvement on the 2012 figure of 6 591, is not sufficient to maintain the level of high-level mathematics skills the country needs. The number of Grade 12 mathematics learners in 2014 achieving at least 70%, a mark often considered a minimum for entry into university studies in a field such as engineering, was around 18 000.

Grade 12 mathematics passes



(In the above graph, figures up to 2014 are actuals, whilst figures from 2015 are targets. A vertical dotted line appears at 2007 as this was the last year of the outgoing curriculum.)

Goal 6	Increase the number of Grade 12 learners who pass *physical science.*

Most of the discussion presented for the previous goal, which dealt with Grade 12 passes in mathematics, applies to this goal too. In particular, the Siyavula textbooks covered both mathematics and physical science and hard copies for both these subjects were distributed to learners.

Indicator 6. Number of Grade 12 learners passing physical science.

Like the indicator on mathematics passes, this indicator experienced a decline following the introduction of the new curriculum in 2008, but from 2010 there has been a steady improvement, with the value in 2014 reaching around 103 000 learners. As with other Grade 12 examination indicators, there was a spike in 2013 of around 143 000 learners. Attaining originally established targets remains a possibility. The positive signs seen in the 2011 TIMSS results with regard to mathematics were also seen in science. Again, this suggests that ongoing gains made in lower grades will be translated into Grade 12 improvements in future years.

5.2 Goals 7 to 9: Improving average performance

Goals 7 to 9 focus on improvements in the average performance of learners within two key international testing programmes.

Goal 7	Improve the average performance of *Grade 6* learners in *languages*.

The discussion of the SACMEQ[41] indicator values appearing in the box below serves as a reminder of the enormous task still facing the country when it comes to improving reading and language competencies at the primary school level. Apart from SACMEQ, an international testing programme which examines language in South Africa at the primary level is PIRLS[42]. South Africa has participated in this programme in 2006 and 2011. Importantly, South Africa's results for these two years are not comparable. In 2011 South Africa, together with Botswana and Colombia, switched from the main PIRLS test to a new so-called pre-PIRLS test, a test designed specifically for developing countries with many learners performing at rather low levels[43]. The main PIRLS test is designed mainly with rich country contexts in mind.

Indicator 7. Average score obtained in Grade 6 in language in the SACMEQ assessment.

SACMEQ was run again across fifteen Southern and East African countries in 2013. Preliminary results will become available during 2015, which will allow South Africa to gauge in which areas of Grade 6 English (or, for some learners, Afrikaans) improvements have occurred, and in which areas the largest challenges lie. The SACMEQ mean for language in South Africa saw a movement from 492 to 495 between 2000 and 2007, a change that is too small, given the size of the sample, to be statistically significant. Of the 15 countries, South Africa was in position 10 with respect to the national reading average. The results from the 2013 testing will be crucial in determining whether the strong emphasis on improvement interventions since 2007 in the form of, for instance, national workbooks and clearer curriculum guidance, have borne fruit, and whether further change or continuity is required.

Goal 8	Improve the average performance of *Grade 6* learners in *mathematics*.

One of the great benefits with the SACMEQ testing programme is that it includes the testing of Grade 6 teachers, using tests that partially repeat questions appearing in the learner tests. This has provided education planners with an invaluable insight into what areas to focus on in developing teachers. As argued in the 2012 NEEDU report, 'teachers cannot teach what they themselves don't know'[44]. One key pattern observed in the results of the 2007 SACMEQ teachers tests is the exceptionally poor level of mathematics performance of teachers in three

[41] Southern and Eastern Africa Consortium for Monitoring Educational Quality.
[42] Progress in International Reading Literacy Study.
[43] See Mullis, Martin, Foy and Drucker (2012: 39). Note that the 421 PIRLS score attributed to 'Eng/Afr (5) – RSA' on the same page is not derived from a nationally representative sample of South African schools, but instead from a sample of only those schools using English or Afrikaans as a language of learning and teaching (medium of instruction) in grades 1 to 3 (Howie *et al*, 2012: 7). Such schools comprise roughly a quarter of South Africa's primary schools.
[44] DBE, 2013c: 25.

provinces: Eastern Cape, Mpumalanga and Limpopo[45]. The professional development activities outlined under Goal 16 are clearly of special importance for these provinces.

Indicator 8. Average score obtained in Grade 6 in mathematics in the SACMEQ assessment.

What was said for the previous indicator applies for this indicator too. The change from 486 to 495 between 2000 and 2007, whilst larger than the change in language, was too small to be an unambiguous sign of an improvement. When SACMEQ 2013 results become available in 2015, these will create a crucial basis for evaluating interventions introduced to improve mathematics after 2007, partly in response to the disappointing 2007 SACMEQ results.

Goal 9	Improve the average performance of Grade 9 learners in *mathematics*.

Goal 9 is the only goal, out of the 27, that has changed following the 2011 Action Plan. The grade for this goal changed from Grade 8 to Grade 9 because the focus grade in TIMSS[46] changed for a few developing countries, including South Africa. In 2002, South African learners were tested in both grades 8 and 9[47]. In 2011, only Grade 9 learners were tested, as the tests were considered more meaningful for this grade. It should be remembered that the TIMSS tests are set at a relatively high standard which is most relevant for schooling systems in developed countries. Apart from South Africa, Botswana and Honduras tested Grade 9, and not Grade 8, in TIMSS 2011.

It is important that inaccurate comparative statistics on educational performance should not cause panic and confusion. Unfortunately, for several years the World Economic Forum (WEF) has published tables with misleading rankings of countries against key education indicators, tables which have received considerable attention in the South African media. For instance, in 2014 the WEF ranked South Africa last out of 148 countries with respect to the 'quality of math and science education'[48]. Rankings such as this by the WEF are based on the opinions of selected business leaders, who rate the education system on a scale from 'extremely poor' to 'excellent'. Given government's own admission that educational quality is a serious national challenge and the availability of educational quality data in South Africa, it is not surprising that interviewees should respond as they do. However it is problematic to use responses of this nature to compile international rankings in education. Whilst South Africa has performed poorly in, for instance, the TIMSS tests, countries participating in TIMSS tend to be countries which take education rather seriously. Around half the countries in the world, generally countries with particularly weak education systems, do not participate in any international testing system.

Indicator 9. Average Grade 9 mathematics score obtained in TIMSS.

As discussed in section 3, improvements in the country's Grade 9 TIMSS results between 2002 and 2011, from 285 to 352 TIMSS points, represent the most compelling evidence that the quality of learning and teaching is improving in South Africa's schools. The 2011 level of performance is still low, but there is a trend in the right direction, and the trend is roughly as fast as one might expect. One can regard improvements in a key subject such as mathematics as an indication of a general improvement across the entire curriculum, given the inter-

[45] Moloi and Chetty, 2010: 50.
[46] Trends in International Mathematics and Science Study.
[47] Whilst the international TIMSS documents refer to TIMSS in 2003, not 2002, and most TIMSS countries tested in 2003, in South Africa the 'TIMSS 2003' testing actually occurred in 2002.
[48] World Economic Forum, 2013.

dependence of subjects. Improved mathematics results are almost certainly also a reflection of improved language skills, which in turn influence results in all subjects.

5.3 Goal 10: Compulsory schooling

Goal 10	Ensure that all children remain effectively enrolled in school at least up to the year in which they turn 15.

Though very few children aged 7 to 15 are not attending an education institution, the approximately 1% who do not must remain a concern, as should irregular attendance. The high enrolment ratios in South Africa for children aged 7 to 15 has tended to hide the fact that around 15% learners do not complete Grade 9, the grade a learner should have reached by age 15 assuming no grade repetition (see discussion under Goal 13). The problem is that many learners do repeat grades and drop out at around age 15 without having reached Grade 9 yet. This problem needs to be tackled largely through education quality interventions which strengthen the capacity of teachers and give all youths a sense of hope in their schooling. Without this hope, learners easily fall prey to a variety of social ills, including substance abuse. The LURITS[49] system, which keeps a record of each individual learner in the public and independent schooling systems, continues to be an important tool for understanding the phenomenon of dropping out and for developing strategies to follow up on the most serious cases.

Indicator 10. Percentage of 7 to 15 year olds attending education institutions.

Values for this indicator, across all provinces, remain close to 100%, according to the General Household Survey, which asks whether household members are 'currently attending any educational institution'. No province has a value below 98,0%. Yet this is an indicator that the system needs to continue paying close attention to, partly because it is clear that some learners are not receiving the schooling they should. Related indicators, such as those dealing with absenteeism and time spent on learning at school, need to be considered in conjunction with this indicator.

The findings of the 2011 national population census of Stats SA point to enrolment ratios for children which are a few percentage points below what is found when Stats SA's General Household Survey datasets are used. For instance, the census points to the percentage of 14 year olds enrolled in an education institution as being 95,5%[50]. These kinds of discrepancies between the census data and the GHS have been observed before. Analysis of individual records in the census data have indicated that even highly educated parents apparently have young children who are not in any kind of education[51]. This seems very unlikely and is the reason why the DBE uses enrolment ratios derived from the GHS for planning purposes.

[49] Learner Unit Record Information Tracking System.
[50] Figure 3.14 in statistical release P0301.4, available on the Statistics South Africa website.
[51] Gustafsson, 2012: 12.

5.4 Goal 11: Access to ECD and Grade R ★★★

Goal 11 ★★★	Improve the access of children to quality Early Childhood Development (ECD) below Grade 1.

Though figures vary somewhat, it is clear that access to ECD below Grade 1 is improving. The General Household Survey (GHS) points to 96% of all first-time Grade 1 learners in 2014 having received schooling in the previous year. In 2009 this figure was below 85%[52].

Even below Grade R enrolment has been increasing, as indicated by the percentage of enrolled four year olds, which rose from 59% in 2009 to 75% in 2013 according to the GHS. The NDP indicates that this figure should reach 100% as a year of schooling below Grade R becomes universal.

Whilst improvements in the numbers are clearly a move in the right direction, in the NDP and elsewhere concerns have been raised about how to monitor and improve the quality of ECD so that it truly strengthens schooling in the later grades. The Department of Performance Monitoring and Evaluation (DPME) of Presidency has completed a study which looks at the impact of the introduction of Grade R in a school on subsequent Annual National Assessments (ANA) results[53]. The results are mixed. In some schools Grade R has contributed towards better learning, but in other schools it has not. Clearly one cannot take it for granted that Grade R is always quality Grade R. It should be emphasised, however, that Presidency's evaluation focuses largely on the impact of the average Grade R service as it existed in the 2005 to 2011 period[54]. Important quality enhancement initiatives have occurred since then, including the introduction, in 2013, of new full colour Grade R workbooks, in line with the books distributed annually for Grade 1.

A number of interventions to improve the quality of ECD have been initiated, and a key challenge in the coming years will be to strengthen these. The DBE will continue to distribute workbooks to all learners each year. Challenges include further improvement of materials on the basis of an extensive evaluation that was concluded in 2012. This evaluation showed that 90% of schools received resource packs in 2011, that on the whole teachers were very positive about the materials, that around 70% of schools used the packs, but that certain improvements were necessary, for instance clearer teacher guides.

Several universities have started offering a National Diploma for pre-school teachers, partly in response to consultations with the DBE. **The professionalisation of pre-school teachers needs to continue.**

ECD continues to be the programme in the provincial budgets with the strongest budget growth[55]. **Good planning will be needed to deal with the estimated 6% of public schools in 2014 which were still not able to cater for community demand for Grade R.**

Presidency's *Diagnostic review of early childhood development*[56] provides a comprehensive outline of the range of ECD challenges, from stunting arising out of malnutrition, to the need for cognitive development. An important milestone was the release in 2013 of the National

[52] DBE, 2013b: 6.
[53] Presidency, 2014.
[54] The impact evaluation focussed on the impact of past Grade R enrolment patterns, at the school level, on ANA results for grades 1 to 6 in the years 2011 and 2012.
[55] 2012 report produced jointly by DBE and UNICEF titled *Public expenditure analysis for the basic education sector in South Africa*.
[56] Richter, 2012.

Curriculum Framework[57] for children from birth to age four. **This document, produced in collaboration with UNICEF and drawing from international best practice, needs to form a basis for better monitoring of the quality of ECD at age four and below, and the design of interventions.**

★★★ ***Indicator 11. The percentage of Grade 1 learners who received Grade R.***

By 2014, about 96% of Grade 1 learners had received a year of Grade R education in the previous year according to the General Household Survey. Five years previously the value stood at 85%. There has thus been steady progress towards the ideal of universal Grade R. Whilst household data need to remain a key source for this indicator, given the variety of settings for Grade R, data collected from schools should also be used. As monitoring of the quality of ECD improves, reporting against minimum standards needs to be increasingly used.

5.5 Goals 12 to 13: Improving grade attainment

The following two goals deal with ensuring that more learners succeed in moving through the grade system without repeating grades, and that fewer learners drop out before Grade 12.

Goal 12	Improve the grade promotion of learners through Grades 1 to 9.

South Africa's grade repetition levels remain lower than in other countries in the region, and reductions in grade repetition have been more pronounced than elsewhere. Specifically, in 2000, 42% of South Africa's Grade 6 learners had repeated some grade in the past, against 48% across other countries in Southern and East Africa. By 2007, the figure for South Africa had improved to 29%, against 40% for the rest of the region[58]. The indicator values discussed below suggest that after 2007, the situation has improved further.

Indicator 12.1. The percentage of children who turned 9 in the previous year and who are currently enrolled in Grade 4 (or a higher grade).

Indicator 12.2. The percentage of children who turned 12 in the previous year and who are currently enrolled in Grade 7 (or a higher grade).

Due to improvements in the way the age of learners is monitored in the Annual Survey of Schools, it has become easier to monitor compliance against age-grade norms. The data indicate, for instance, that the percentage of learners who turned 12 in the previous calendar year and who were in Grade 7 or a higher grade (the second of the two indicators above) improved from 61,3% to 63,1% between 2010 and 2013[59]. In the absence of any grade repetition or late entry into Grade 1, these figures would be 100%. The 2013 value for the first of the two indicators was 73%. For both indicators, values vary considerably across provinces, with Gauteng displaying the most favourable values during the 2010 to 2013 period. It is important to bear in mind why upward trends for these indicators are desirable. Better alignment between age and grade in the schooling system, apart from pointing to less grade repetition and thus, hopefully, better learning in the case of individual learners, is important insofar as a wide range of ages within the same class is known to exacerbate discipline problems.

[57] *National early learning and development standards for children birth to four years (NELDS)*, produced by the DBE.
[58] DBE, 2013f: 22.
[59] See Appendix B of the current plan.

Goal 13	Improve the access of the youth to Further Education and Training (FET) beyond Grade 9.

Getting more learners to obtain the National Senior Certificate (NSC) on successful completion of Grade 12 in a school, or some equivalent qualification outside the schooling system, is widely considered an important prerequisite for improving economic growth and reducing income inequality in South Africa[60]. Yet as attainment of twelve years of education is improved, it is important to continue current efforts to ensure that all South Africans successfully complete Grade 9, the last grade of the General Education and Training (GET) band of the curriculum. Around 15% of South Africa's poorest youths were still not completing Grade 9 in around 2011[61].

Successful completion of Grade 12, or an equivalent non-school level, is not easy to monitor, partly because fluctuations from one year to the next can be the result of changes in enrolment and grade repetition patterns occurring as much as a decade previously. The important thing is the general pattern. This general trend has been an upward one, though a slow one. In the period 2000 to 2014, on average the number of NSC passes has risen by around 10 000, or 3%, per year. Whilst this does signal progress, this increase is only around half as large as what is required to keep up with official targets. Far too few youths obtain an education qualification, of any kind, and much must still be done, within the schooling system and in the Further Education and Training (FET) college sector to address this problem.

There has been much debate in recent years around whether the standards of the Grade 12 examination system are sufficiently high. This prompted Umalusi, the examinations quality assurance body, to release, in 2011, the NSC marks standardisation process for the first time ever. In 2013, the Minister of Basic Education set up a task team to investigate the quality of the NSC. The team's report, released in 2014, pointed to a number of quality and structural concerns which it thought should be addressed. For instance, it argued that criteria for achieving specific classes of the NSC, such as a Bachelors level pass, be made more stringent, that the vocational routes within the examination be expanded, and that special attention needed to go to upholding high and common standards across the various official languages. Importantly, the report also indicated that 'The standard and quality of the NSC is improving'[62]. The Minister has broadly accepted the task team's recommendations, including the important recommendation that stability in the examination system is required, implying that many changes would have to be phased in gradually. The DBE needs to ensure that learners in different years are not unfairly discriminated against and that there is no confusion amongst post-school institutions and employers as to the meaning of the NSC, including the meaning of the subject-specific achievement symbols.

There is little disagreement between the various stakeholders, including government, around the need to increase the number of Grade 12 learners achieving high marks in key subjects, as opposed to just passes (see the discussion under Goal 5 concerning mathematics). What is more a matter of debate is how changes in the Grade 12 marking and pass criteria might encourage teachers and learners to aim higher.

All of the goals 14 to 27 in this plan on how to improve the quality of schooling contribute in some way towards getting learners to achieve the NSC. It has become increasingly accepted that whilst some results can be achieved through 'last minute' interventions targeted at the

[60] See for instance Branson, Garlick, Lam and Leibbrandt (2012).
[61] DBE, 2013b.
[62] DBE, 2014b: 5.

final years of schooling, it is only through improving learning and teaching at the primary level that large improvements at the exit point of the schooling system will be seen.

One important initiative aimed at making the grades 10 to 12 subject mix more responsive to the interests of a variety of students is the Technical Secondary Schools Recapitalisation Grant. This grant focuses on increasing access to the four technical and vocationally-oriented subjects engineering graphics and design, civil technology, electrical technology, and mechanical technology. Statistics from the 2013 Grade 12 examinations indicate how little change there has been since the apartheid era in the taking of these subjects. Almost half, specifically 46%, of white male learners took at least one of these subjects, compared to 5% of black African male learners. Across all races, males are three times as likely to take a technical subject as females. Clearly there is a need for more black and female students to take these subjects. Around 16% of public schools offering Grade 12 offer at least one technical subject. These schools are relatively well distributed across the country. It has been estimated that just by increasing participation in technical subjects within these schools the number of learners taking technical subjects can be tripled.

An initiative started in 2012 to improve the ability of Grade 12 learners to prepare for the year-end examinations was the distribution of the newly designed *Mind the gap* study guides. What stands out about this initiative is that it was subjected to a scientific impact evaluation which indicated that learners who received the guides performed significantly better in the examinations than learners who did not[63]. These results have led to a more widespread distribution of the study guides.

Career guidance, occurring inside and outside the subject life orientation, is important for ensuring that learners select appropriate subject combinations as they enter Grade 10 and that in general learners feel motivated to achieve good results in the Grade 12 examinations. There are a number of initiatives under way to strengthen career guidance, some of them the result of partnerships with employers. But good career guidance needs to become more accessible to learners. Work in this area has been facilitated by a 2012 policy framework for strengthening career guidance, produced through a multi-stakeholder process[64]. Materials aimed at getting appropriate learners to consider teaching as a career have also been improved[65].

Indicator 13.1. The percentage of youths who obtained a National Senior Certificate from a school.

Indicator 13.2. The percentage of youths who obtained any FET qualification. (This is an indicator of concern to DBE and the Department of Higher Education and Training.)

The first of these two indicators stood at around 42% in the 2009 to 2011 period, according to the DBE's analysis[66]. There are difficulties both on the side of the numerator and the denominator of this indicator. The number of National Senior Certificates (NSCs) obtained each year is influenced by a variety of factors, including results of the supplementary examinations following the main year-end examinations, the results of part-time students, and Independent Examinations Board results. The DBE is working on establishing a more integrated reporting system that would incorporate all these NSC strands. With respect to the denominator, any calculation of the indicator value needs to make adjustments to deal with obvious discrepancies between the population figures and enrolment figures. Despite these

[63] See DBE (2013e).
[64] See *Framework for cooperation in the provision of career development services in South Africa* at http://www.saqa.org.za/docs/pol/2012/Framework_for_Career_Development_Services_2012.pdf.
[65] See for instance *Information guide on initial teacher education: Make a difference... become a teacher* available at http://www.education.gov.za.
[66] See DBE (2013b).

difficulties, the indicator values reported by the DBE can be considered sufficiently reliable, at most about a percentage point off the true value. The value for 2014 was estimated to be 45%, based on an examination of recent trends with respect to the number of NSC recipients, the size of age cohorts at around the age 18 point and ratios derived from the General Household Survey datasets. The method for arriving at the 2014 national and provincial baseline figures seen in the indicator tables at the end of the plan is essentially the same what was used for the 2013 progress report (DBE, 2013e).

The second of the two indicators should reflect the value of the first indicator, plus those youths who do *not* obtain the National Senior Certificate but do obtain some other Further Education and Training (FET) qualification. It is still difficult to estimate this latter figure, partly because when respondents to household surveys indicate that their highest level of education is a qualification from an FET college, it is not clear whether this individual *also* has an NSC. Many do, as reflected in the fact that between a half and three-quarters of public FET college students in 2013 had received the NSC previously. The available data suggest that the difference between the two indicators is not more than two percentage points at the national level. This informs the values seen in the appendix of this plan.

6 The goals dealing with the *how* of improving schooling (Goals 14 to 27)

Goals 14 to 27 deal with the *how* of achieving the 13 output goals described above. They thus deal with matters relating to teachers, class sizes, classroom practices, educational materials, and school management and governance. For a more in-depth discussion of how these factors contribute towards better schooling in the South African context, and how the link to each other, see the 2011 Action Plan.

6.1 Goal 14: Supply of young teachers

Goal 14	Attract a new group of young, motivated and appropriately trained teachers to the teaching profession every year.

The basic education sector, like so many sectors in the economy, continues to experience problems attracting enough young and appropriately skilled people. The indicator values for this goal (see below) reflect the seriousness of the problem. The number of young people joining the teaching profession is still only around two-thirds of what it should be. The DBE's data indicate that the shortfall is partly being covered by the entry of older qualified teachers. However, it is also clear that a substantial number of schools are unable to fill posts, in particular in relation to certain subject specialisations such as mathematics and African languages.

A positive development has been the increase in the number of graduates in initial teacher education from around 6 900 in 2010 to 17 500 in 2014, a 150% increase. Further improvements are envisaged[67], partly due to the opening of new teacher training campuses at the old teacher training colleges. Implementation of the latter started in 2013 at the newly established University of Mpumalanga.

To reinforce these trends, the DBE is exploring with Treasury the possibility of further increases in spending on the Funza Lushaka bursaries for prospective teachers, given that growth in real terms in this budget is lower than expected growth in the number of new teachers. The NDP in fact points to the need to expand the bursary programme. Moreover, better ways of ensuring that all Funza Lushaka teachers are placed in public school teaching posts are being explored, partly by making it easier to transfer surplus teachers in one province to another province.

Currently most young people studying to become teachers are not Funza Lushaka bursary recipients, and it is clear that a holistic strategy that goes beyond Funza Lushaka is needed. Communication is an important element of this strategy. Factors which make teaching a rewarding profession, including opportunities to influence young people's lives and build a better, more equitable nation, should be properly communicated to young teachers-to-be.

Indicator 14. The number of qualified teachers, aged 30 and below, entering the public service as teachers for the first time during the past year.

Analysis of the payroll data indicate that around 6 800 new, qualified teachers, aged 30 and below, entered the public schooling system in 2014. As explained in Appendix A, due to the phenomenon of multiple entry and departure amongst many young teachers, it is important to consider several years of data at once when obtaining values for this indicator. The 6 800 figure falls short of the 8 000 target for 2014 appearing in the 2011 Action Plan. The inflow of young teachers into the system remains one of the most serious challenges confronting the

[67] The target for 2016/17, in the 2014 annual performance plan of the Department of Higher Education and Training is 20 600.

DBE, but also the Department of Higher Education and Training. Part of the problem arises from the general shortage of university-ready youths in recent years, a shortage which affects all professions. As was seen earlier in this plan, that situation has been improving, in particular with the large increases in recent years in learners qualifying for Bachelors level studies.

6.2 Goal 15: Teacher availability and class sizes

Goal 15	Ensure that the availability and utilisation of teachers are such that excessively large classes are avoided.

The availability of teachers in schools and classrooms has not improved across the schooling system in any substantial sense. Challenges such as excessively sized classes remain serious. As reflected by the first indicator for this goal (see below), in 2013 35% of learners were in classes with more than 45 learners. This is only slightly better than the situation in 2009. Around 10% of schools do not have all educator posts filled, with the average vacancy rate in these schools being 6%. One key factor which has made placing an adequate number of teachers in schools difficult is substantial enrolment growth in recent years. Between 2010 and 2013 enrolments in Grade 1 in public schools grew by 9% and this increase has since moved up the grades. Analysis conducted by the DBE has established that the bulk of this increase is due to larger age cohorts, in other words population growth, and not other possible factors such as 'ghost learners' (inflation of learner numbers by school principals) or higher levels of grade repetition.

As explained in the 2011 Action Plan, the dynamics of teacher availability are complex and are inextricably linked to other goals in this plan. The under-supply of teachers (see the previous goal) is a part of the problem, but poor management of teacher time within schools also exacerbates the situation. A key policy governing teacher availability is the post provisioning policy, which in a narrow sense is the formula that determines how many educator posts each school receives, though the entire post provisioning system includes incentives paid to teachers to teach in remote areas, the procedures governing who gets to be appointed as an educator within each school, strategies to retain teachers within the public system, and the rights of teachers when enrolments decline and teachers must move. Moreover, ensuring that the number of posts allocated to each school is in line with the number of physical classrooms is important. In 2013, the DBE, with support from UNICEF, completed a major review of the post provisioning system, using the services of experts from the consulting firm Deloitte. This places the DBE in a far stronger position to make changes to the existing system, a process that will require a careful balancing of various elements, including the teacher salary structure and provincial budgets. Increases in the purchasing power of teachers, which were necessary (see goal 17 below), have placed considerable budget pressure on provincial departments. For example, in Gauteng spending on personnel as a percentage of all recurrent spending is expected to rise from 87% to 89% between 2013 and 2016, with an increase from 88% to 90% expected in Mpumalanga[68].

Indicator 15.1. The percentage of learners who are in classes with no more than 45 learners.

Indicator 15.2. The percentage of schools where allocated teaching posts are all filled.

In 2009, 64% of learners in public ordinary schools were in classes not exceeding 45 learners, according to the Annual Survey of Schools. In 2013, this national statistic stood at 65%, in

[68] *Estimates of provincial revenue and expenditure* for the two provinces, released in 2014.

other words a third of learners remained in classes which were clearly too large using a 45-learner cut-off. For all provinces the indicator value remained more or less constant between 2009 and 2013. The curriculum phase that experienced the largest improvement was the Intermediate Phase (grades 4 to 6), where the percentage of learners in classes of 45 or fewer learners rose from 64% to 71% between 2009 and 2013. In 2013, extremely large classes of over 60 learners remained a serious problem. For instance, the percentage of grades 1 to 7 learners in such classes in Eastern Cape was 13% in 2013. Nationally this figure was 6%.

Turning to the second indicator, unfilled teaching posts clearly do contribute towards over-sized classes. The School Monitoring Survey has permitted a more accurate picture of the size of the vacant posts problem, partly as it allows the DBE to verify reports from provincial human resources directorates against what school principals themselves say is the situation within the school. The DBE's analysis points to around 90% of schools having all educator posts filled[69]. In those schools where not all posts were filled, the average vacancy rate is around 6%. The situation varies across provinces, with Free State experiencing particularly serious problems in filling vacancies. The data also confirm that grades 10 to 12, of all grades, are most affected by the problem of vacant posts.

Whilst it is important for the DBE to confirm directly with school principals what the staffing situation is at schools, it is also important that administrative systems, including the personnel payroll (Persal) system, become better at providing accurate information, down to the school level, on matters such as number of vacant posts and 'excess' teachers at any point in the year.

6.3 Goal 16: Teacher capacity and professionalism ★★★

Goal 16 ★★★	Improve the professionalism, teaching skills, subject knowledge and computer literacy of teachers throughout their entire careers.

Our picture of teacher capacity and what is being done to improve this, has become clearer. Whilst testing of teachers, including self-assessment through special diagnostic tests, is still very rare in the schooling system, Annual Survey of Schools data on teachers' own opinions of their strengths and weaknesses in various subjects is beginning to inform policy and actions. Moreover, reports pointing out specific areas of weakness in the Grade 12 examination and Annual National Assessments (ANA) are more widely used. Monitoring of the investment made by teachers in their own development has improved through the School Monitoring Survey. It is clear that for around half of educators 12 or fewer hours of professional development in a year is the norm, and that there are many schools where this activity is not taken seriously, partly due to a lack of available external training and guidance on how schools can initiate their own training.

The Integrated Quality Management System (IQMS), gradually expanded and strengthened since its inception in 2003, has been closely monitored in recent years, partly through nationally employed 'IQMS monitors', given its importance for acknowledging teacher professionalism. The 2012 national IQMS report, the first of its kind, indicated that across the public schooling system 12% of teachers were rated as 'outstanding', 57% as 'good', 31% as 'meets minimum standards' and 0.5% as 'unacceptable'[70]. What is important is that within schools differentiation is occurring: 86% of teachers in 2013 were in schools where at least two of the four IQMS levels were assigned to teachers, whilst a quarter were in schools where

[69] See DBE (2014a). As explained in this report, limitations in the data mean that the 90% figure refers to schools which do not have educators paid by the school governing body (SGB). The figure thus refers to more historically disadvantaged schools, which are the schools which generally have the greatest difficulties in attracting teachers.
[70] Department of Basic Education (2012: 17).

three different levels were assigned. The IQMS ratings are based largely on self-assessments, though peers at the school influence the final rating. The process through which these assessments are occurring represents an important school dynamic. Knowing there is room for improvement, and knowing which teachers have the strongest need for further professional development within a school, is a prerequisite for effective teacher development programmes.

Concrete steps have been taken in recent years to improve access to professional development programmes amongst educators. For instance, the DBE provides more guidance than before, through its website, on what training is offered by the various higher education institutions. In 2012 a landmark agreement was signed between the DBE, provincial departments and all five major teacher unions, for the latter to become more integrally involved in the in-service training area. Collaboration between the employer and unions in this regard has been successful in other countries and helps to raise the status of professional issues in the relationship between the employer and unions. In terms of the 2012 agreement, unions use public funds to source appropriate training, subject to agreed upon quality assurance criteria. The importance of quality assuring the available training has been underlined by, for instance, a key evaluation by the Council on Higher Education (2010), which included the finding that half of the evaluated in-service training programmes, which focussed mainly on mathematics, were insufficiently geared towards helping teachers solve practical problems in the classroom. A further challenge is strengthening a system within which teachers plan and account for their professional development activities. The 2012 report on progress to date with regard to the Continuing Professional Teacher Development (CPTD) management system[71] points to serious hurdles, in terms of budgets and human capacity, if the originally envisaged online system is to be pursued.

So what are the key priorities to pursue going forward? In prioritising, it is important to strike a balance between professional development aimed at improving the capacity of teachers, and accountability systems, such as the ANA, which provide an incentive for teachers to put the capacity they have to proper use in the classroom. The 2012 report of the newly established National Education Evaluation and Development Unit (NEEDU) drew an important distinction between the problem of 'cannot' and 'will not'. Professional development is needed for the former, accountability for the latter. Whilst there is little doubt that capacity building is needed, evidence also suggests that some of South Africa's teachers produce worse learner performance than what is produced by *similarly* capacitated teachers in other countries in the region[72].

One priority must be to strengthen further the messages sent to teachers. Confusing messages with respect to the how of delivering the curriculum was a problem identified in the 2009 review of curriculum implementation[73]. Partly, this was due to the fact that different levels of the system issued different guides. The 2012 NEEDU report, which was based on visits to 133 primary schools during 2012, concluded that in the Foundation Phase there was still insufficiently focussed guidance for teachers on how to strengthen teaching methods and what standards to set for different grades. The Curriculum and Assessment Policy Statement documents, which were being introduced in the Foundation Phase in 2012, as well as the national workbooks, provide a good point of departure for greater clarity, but **more accompanying guides, for instance in relation to practical uses of the workbooks, are needed**. The assessment banks (sets of recommended questions for learners) available on the Thutong education portal are an example of the kinds of resources that can be strengthened, for instance through expanding the volume of materials, clarifying the CAPS-alignment of the resources and the **introduction of innovative online tools, such as tools for building tests**.

[71] *The status of the CPTD management system*, available on the SACE website.
[72] Department of Basic Education, 2013b: 31.
[73] *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement*, available on the DBE website.

A second priority must be to create a stronger enabling framework for teacher-initiated professional development activities, in particular professional learning communities (PLCs). PLCs, which are groups of teachers formed by teachers themselves for the purpose of professional development, feature strongly in the 2011 policy on teacher development[74], but have yet to 'take off' across a wide range of schools. Work on best approaches for PLCs in the South African context is still at an early stage[75] though certain groups, for instance the Association for Mathematics Education of South Africa (AMESA), an association of mathematics educators, has done some exemplary work. Experiences in other countries have shown that for PLCs to flourish, **advocacy campaigns informed by the actual experiences of teachers and effective 'how-to' guides are needed**. It should be made clear that contributing towards PLCs will influence a teacher's IQMS rating. **The National Teacher Awards should include the setting up and development of PLCs as an award criterion.** Online diagnostic tests that teachers can use to assess their own strengths and weaknesses, tools which were identified as important by the 2011 policy, should become more available and widely used, partly so that teacher-initiated professional development activities can focus on the right things.

Thirdly, externally provided in-service training must become better and more readily available. Currently, around a third of the time spent by teachers on professional development is accounted for by training provided by the education department or some other external provider, such as a university. Whilst the proportion may be right, there is still a need for more of this kind of training, given how low the overall amount of time spent on professional development is. In recent years, much external training has focussed on orienting teachers to new curriculum documents. In the context of a commitment to an extended period of curriculum stability, following the completion of the CAPS roll-out in 2014, external training will be able to focus to much larger degree on subject knowledge and teaching methodology. **The DBE will strengthen further its provision of relevant information to teachers on who provides what kind of training. The DBE will also repeat its 2008 professional development survey and publish a report aimed at guiding future developments, partly through an analysis of teachers' own opinions of the various types of training they experience.**

Fourthly, greater access to and educational use of digital resources by teachers must be accelerated. A priority programme in this regard continues to be the Teacher Laptop Initiative. The considerable teething problems of this initiative have largely been ironed out. In moving forward, not just the technologies themselves, but their use to promote better teaching practices, must be emphasised.

Monitoring and evaluation of teacher professional development must be strengthened. **The DBE should work closely with the South African Council for Educators (SACE) to ensure that at the very least, basic procedures for the school principal to monitor teacher investment in professional development are in place.** The original plans for an integrated online system in the near future may have been overly ambitious. Lessons should be drawn from parallel developments in the medical profession.

The NDP has called for incentives linked to ANA results. **The DBE's response to this call will include better acknowledgement of the efforts of teachers in schools where ANA results show a credible upward trend.** This acknowledgement may occur through the National Teacher Awards or an alternative programme. The methodology for identifying schools will make use of various sources of data, and several school factors, to ensure that the process is fair and credible.

[74] *Integrated strategic planning framework for teacher education and development in South Africa*, available on the DBE website.
[75] See for instance Chauraya (2013).

Indicator 16.1. The average hours per year spent by teachers on professional development activities.

★★★ Indicator 16.2. The percentage of teachers who are able to attain minimum standards in anonymous and sample-based assessments of their subject knowledge.

The 2011 School Monitoring Survey has provided the best data to date on the effort invested by educators in professional development, as well as the different types of development activities and teachers' opinions of training received. On average, educators spend 39 hours a year on professional development, though half of educators spend 12 or fewer hours a year. Level of effort, as well as the quality of training received, both need strengthening. Limpopo stands out as a province where both the level of effort and the perceived quality are low.

Despite the fact that the 2013 collection of SACMEQ data will include test results from Grade 6 teachers, comprehensive data for this indicator are still some years from being realised. However, the DBE remains committed to improving our knowledge about what teachers know. Work on this indicator should be an extension on the development of the diagnostic tests referred to above.

6.4 Goal 17: Teacher well-being and job satisfaction

Goal 17	Strive for a teacher workforce that is healthy and enjoys a sense of job satisfaction.

The 2011 Action Plan referred to data indicating that 80% of teachers could be considered satisfied. The data sources in question, TIMSS and PIRLS[76], can unfortunately not be used to examine a trend, because satisfaction questions in the 2011 collections for these two programmes were different to satisfaction questions used previously. But for all years since 2002 where internationally comparable data are available, one thing that stands out is that levels of teacher satisfaction are similar to the international average. Moreover, South Africa's teachers emerge as considerably more satisfied than those in Botswana[77]. Clearly job satisfaction statistics need to be interpreted with much caution due to their sensitivity to factors such as culture and language. Frustrations that many teachers experience with the system within which they work, and difficulties teacher have dealing with socio-economic problems in the community such as poverty and substance abuse, should not be under-estimated. One trend over recent years that has probably contributed to greater teacher job satisfaction has been substantial increases in the real wages, or purchasing power, of teachers. The 2011 Action Plan reported that between 2007 and 2010 average teacher pay improved by 19% in real terms. This trend continued beyond 2010. Teacher pay in mid-2014 was 29% higher in real terms than it was 2007[78]. In fact, household data indicate that increases for teachers have been better than for other professionals in the country, so that even relative to other professionals teachers were better off in 2010 than they were in 2007[79].

Other steps forward with respect to teacher well-being include the finalisation, in 2013, of a national policy framework for HIV, sexually transmitted infections (STIs) and TB, which assists the sector to devote funds and human resources towards, for instance, support to teachers affected by HIV. The National Teacher Awards, a major annual event on the

[76] Trends in International Mathematics and Science Study, and Progress in International Reading Literacy Study.
[77] See Mullis, Martin, Foy *et al* (2012: 323) and Mullis, Martin, Gonzalez, *et al* (2004: 320).
[78] This considers only increases in the values of salary notches. If the annual movement of educators up the notches were considered, the increase would be even larger.
[79] Armstrong, 2014: 14.

education calendar for many years, has expanded in recent years with more awards being given in more categories. Yet there are areas where progress has been slow and teachers have been disappointed. In particular, the Teacher Laptop Initiative (discussed in section 4.2 above) and other programmes aimed at getting teachers to take advantage of emerging technologies require special attention.

Indicator 17. The percentage of teachers absent from school on an average day.

The School Monitoring Survey of 2011 confirmed what earlier research had shown, namely that on an average day, around 8% of educators are absent from school, for a variety of reasons, both legitimate and not legitimate[80]. As pointed out in the 2011 Action Plan, teacher absenteeism in South Africa is similar to that found in many other developing countries. This does not mean that current levels of absenteeism are acceptable. In developed countries, absenteeism figures are around half of what they are in developing countries. If one breaks South Africa's 8% figure down by reason, one finds that the largest reason is sick leave, which accounts for around 3% of all school educators on any day. This is not high if one considers that many developing countries experience levels above 3% in the labour force as a whole and in South Africa the figure for the general labour force has been around 3% in recent years[81]. The second largest reason, after sick leave, is official work, which accounts for 1.2% of all educators. This would include performing errands such as delivering documents to the district office. This could be reduced through the greater availability of administrative assistants at schools and stronger e-education systems so that teachers could focus more on their core educational responsibilities. The School Monitoring Survey, like earlier studies, points to particularly high educator absenteeism levels in KwaZulu-Natal and Eastern Cape.

6.5 Goal 18: Curriculum coverage in schools

Goal 18	Ensure that learners cover all the topics and skills areas that they should cover within their current school year.

As indicated below, progress has been made towards better methods and tools to monitor curriculum coverage. This has occurred in the context of better guidance, through the Curriculum and Assessment Statement (CAPS) and national workbooks, on what work should have been covered by specific weeks of the year. The key challenge in the coming years will be to move from systemic research to practical tools that can be used by all districts and school principals to monitor curriculum coverage. There is a real risk that must be managed, namely the risk that monitoring leads to a 'tickbox approach' to the curriculum, where teachers seem to comply with timeframes, but there is too much compromising in terms of depth and actual learning. In this regard, it has become increasingly clear that there is not enough good guidance offered to teachers on how to deal with a multitude of abilities within the same class. Decisions on when to move from one topic to the next in the curriculum when some learners are still clearly struggling with the previous topic are extremely difficult decisions for teachers. Support and guidance for teachers here is crucial.

Indicator 18. The percentage of learners who cover everything in the curriculum for their current year on the basis of sample-based evaluations of records kept by teachers and evidence of practical exercises done by learners.

[80] DBE, 2014a.
[81] Scheil-Adlung, X. (2010). *Paid sick leave: Incidence, patterns and expenditure in times of crises*. Geneva: International Labour Organization. Also *Adcorp employment index report*, April 2012.

This indicator, still a relatively new one in the South Africa education policy debates, reflects the increasing concern over how teachers deal with the complex matter of pacing topics from the curriculum across the school year. Currently, the system is still several steps away from having a workable methodology for tracking curriculum coverage in any class in a school. This is currently a monitoring challenge not just in South Africa, but elsewhere too. What has been tested, through the School Monitoring Survey, is a method whereby external assessors examine the level of effort being put into curriculum coverage, which would be closely linked to the degree of success in covering the whole year's curriculum. The DBE's research[82] has revealed that on average 53% of learners were putting in at least a basic minimum level of effort, where this would be, for instance, seven mathematics exercises a month at the Grade 9 level or six language exercises a month in Grade 6. These levels, which are arguably low, represent typical levels found in historically better performing schools, specifically suburban schools. The 53% at the national level varied, at the provincial level, from 24% in the case of North West to 85% in the case of Gauteng.

6.6 Goals 19 to 20: Educational materials ★★★

Goal 19 ★★★	Ensure that every learner has access to the minimum set of textbooks and workbooks required according to national policy.

Since the release of the 2011 Action Plan the distribution of national workbooks, books in which learners write and which become the property of learners, has become an established feature of the public schooling system, with deliveries occurring every year from 2011 to 2015. The national workbooks initiative represents one of the most ambitious projects ever undertaken by government to improve teaching and learning practices. In 2014, the scope of the workbooks initiative extended from Grade R to Grade 9, and covered mathematics and languages, as well as life orientation in certain grades. In addition, the Siyavula series of mathematics and physical science textbooks has been delivered to learners in grades 10 to 12. This more interventionist role of the national department in the area of books was partly a response to insufficient access to texts in the classroom, and partly aimed at addressing the need for stronger signals relating to minimum learning requirements. The number of workbooks, textbooks and study guides printed and distributed by just the national government for the 2011 to 2013 school years was around 117 million. To get a sense of what 117 million books means to the system, it is useful to bear in mind that in 2010, there were about 50 million textbooks that learners had access to in our public schools. If the national policy of one textbook per subject were achieved, there would be 74 million textbooks used by learners in schools. Importantly, national initiatives do not replace provincial programmes to supply textbooks. Instead, they supplement provincial programmes.

As mentioned in section 3 above, the international TIMSS[83] programme confirms that schools have responded positively to government efforts to promote a greater use of structured texts by teachers: between 2002 and 2011 mathematics teachers reporting that they used a textbook as a basis for planning their teaching increased from 30% to 70%. The 2011 School Monitoring Survey, the first national survey ever involving physical inspections of books in classrooms, found that in 90% of Grade 6 mathematics classes visited, learners could show inspectors books and that in these classes, on average 9.4 of every 10 learners had a book with him or her[84]. This is still not ideal, but these figures point to a healthier situation than figures quoted in the 2011 Action Plan. In just over 70% of classes visited in 2011, learners could show textbooks, and the figure was similar for workbooks, meaning many learners had both

[82] DBE, 2013a.
[83] Trends in International Mathematics and Science Study.
[84] Department of Basic Education (2013a: 10).

books with them. The School Monitoring Survey revealed a similar situation for other grades and subjects other than mathematics, with access to books being best in grades 10 to 12. Clearly, the 10% of classes visited where learners did not have any books with them during the inspection should be a cause for concern. This figure was in fact higher in schools serving wealthier communities, which points to the widespread use of other materials, such as worksheets, in better off schools. Yet what does seem to pose a serious challenge is the fact that in quintiles 1 to 3 schools serving poorer communities, no books of one type or another could be seen in 8% of classes visited. A part of the explanation is that books are left at home or are locked in cupboards at the school, instead of being used as they should.

The quality of textbooks and workbooks must be carefully monitored. The national workbooks, which are available on the DBE website, have in general been well received. These resources are rich in content. For instance, the Grade 6 mathematics workbooks contain 500 pages of explanations and exercises in full colour and include suggestions on how teachers can pace the work through the year. The DBE commissioned the Australian Council for Educational Research (ACER) to provide an external evaluation of the workbooks. ACER's 2013 report[85] was on the whole positive about the quality of the resources, and actual use of the workbooks in classrooms. A key recommendation made was that teachers require better guidance, possibly through videos, on how to make the best use of materials in the classroom.

The 2011 Action Plan indicated that the national department needed to assume a stronger leadership role in the quality assurance of textbooks used in schools. The DBE has established a more comprehensive national approval process for books, and by 2013 national textbook catalogues had been released for all grades for the first time. The catalogues are not only the outcome of a quality assurance process, they also reduce the number of titles in response to criticism that in the past the presence of too many titles made teacher in-service training difficult and that in an international comparison the number of different books used in South African schools was exceptionally high[86]. Despite recent changes, teachers still enjoy considerable choice. For instance, there were eight titles to choose from in Grade 7 mathematics[87]. Provinces have been supportive of the national catalogues and have reported that these have helped to reduce the average prices of books, through economies of scale.

In the coming years efforts should be largely concentrated on consolidating the major innovations introduced in the years preceding 2015. **Better guidance is needed for teachers on how to make the best use of what are still relatively new resources. It needs be become clearer to teachers how national workbooks, textbooks, the new curriculum elements and Annual National Assessments are linked to each other.**

The complex system designed to get quality learning materials to the classroom functions relatively well, but there is still much wastage and the quality of service delivery is uneven across the country. Part of what is needed is a firmer national policy framework, including specifications around how monitoring should occur. **The DBE will be releasing a draft policy framework for public comment in 2015.** This policy will assist in ensuring that we learn from past mistakes, in South Africa and beyond. The system for supplying materials needs to balance centralised control and school-level flexibility. The NDP[88] emphasises that the ideal must be effective school principals whose work is not made more difficult by poorly functioning central procurement processes. Even well-functioning centralised systems are typically unable to deal with the kinds of last minute resourcing adjustments that schools continuously have to make as learner numbers change. At the same time, departmental

[85] Australian Council for Educational Research (2013).
[86] Department of Basic Education (2009: 70).
[87] This is titles in English. Versions in Afrikaans not counted as separate titles.
[88] National Planning Commission (2012: 310).

procurement arrangements that benefit schools, for instance by lowering prices through bulk orders, are clearly needed. The South African Schools Act principle that it is management readiness that should determine which procurement rules apply to which schools, should be upheld. Fee-charging public schools should be able to opt into centralised procurement systems, whilst well-run no fee schools should enjoy relative freedom with respect to how their public funding is utilised.

Very public debates in recent years around the quality of service delivery in relation to the provisioning of books underline the importance of having a clear monitoring and accountability framework. Here it is important to emphasise, as was done in the 2011 School Monitoring Survey, that what ultimately counts is that learners should have access to the materials they need in the classroom, and at home. Monitoring of contracts with providers, deliveries, and school textbook retrieval systems is important, and should be strengthened, but only focussing on this is no guarantee that educational materials are in the hands of learners. There needs to be more detailed reporting at the national and provincial levels on the various parts of the book supply system, but given the complexity of the system, clear guidance is needed on what things to concentrate on.

Indicator 19. The percentage of learners having access to the required textbooks and workbooks for the entire school year.

The 2011 School Monitoring Survey's visits to classrooms in a nationally representative sample of schools present the best source of information the schooling system has had so far on the actual access by learners to texts. A national average of 61% was calculated, based on data from two grades and two subjects, and using an adjustment to take into account the fact that in schools serving better off learners, the presence of, say, worksheets instead of books would not represent a problem[89]. The methodology used is clearly a stringent one, as a learner without a book with him or her on the day of the classroom visit might have left the book at home, and could thus have access the following day. However, the method is a relatively simple one and probably offers a good basis for tracking improvements over time. The School

Goal 20	Increase access amongst learners to a wide range of media, including computers, which enrich their education.

Access to computers has been discussed in section 4.2 above. The discussion for this goal focuses on libraries. The School Monitoring Survey of 2011 confirmed that what was said about primary schools in the 2011 Action Plan applies to the schooling system as a whole: around 40% of learners are in schools with access to a stand-alone library (this would exclude access to just book corners or classroom libraries). This 40% is also confirmed by the 2011 PIRLS questionnaires[90]. This latter source moreover provides a picture of the stock of books of school libraries relative to enrolments: just under half of the existing school libraries have three or more books per learner, around a quarter have five or more books per learner.

The last few years have seen important steps towards equipping all schools with libraries. Above all, the policy basis for obtaining funds and planning school libraries is now clearer. The first ever comprehensive set of guidelines for libraries was released in 2012[91]. These guidelines indicate that there should be at least five books per learner. Given that only around one in ten learners have access to this level of library services, there is clearly much work to

[89] DBE, 2013a.
[90] Mullis, Martin, Foy and Drucker, 2012: 157.
[91] See *National guidelines for school library and information services* on the DBE website.

do and the challenge is not just to establish new libraries, but also to ensure that existing libraries are expanded. The 2013 school infrastructure norms[92], discussed under Goal 24, provide further details on minimum standards for libraries, for instance that stand-alone school libraries should be at least 60 square metres in size.

Indicator 20. The percentage of learners in schools with a library or multimedia centre fulfilling certain minimum standards.

The School Monitoring Survey data[93] indicate that by 2011, 40% of learners had access to a school library, where this was defined as either a permanent stand-alone library (so not a classroom library) or a mobile library. Excluding mobile libraries would reduce the national figure to 37%. If classroom libraries are included, the figure becomes 58%. Just as Limpopo stands out as a province with a particularly low presence of schools able to offer computer subjects (see section 4.2), this province also stands out as having a particularly poor presence of school libraries. Only 8% of learners in Limpopo have access to a school library, whilst the national figure is 40%. Tracking trends with respect to school libraries is still difficult, given that different systems use somewhat different definitions of what constitutes a school library, but the figures we have suggest that there has not been any major improvement in recent years. A priority for the DBE is to strengthen the monitoring of libraries and multimedia centres, including the use of these facilities and improvements in their quality and contents. Clearly, as e-education becomes more widespread, there will be a movement away from more traditional libraries, and this will need to be taken into account in the monitoring systems.

6.7 Goal 21: School management ★★★

Goal 21 ★★★	Ensure that the basic annual management processes take place across all schools in the country in a way that contributes towards a functional school environment.

☞ **The NDP on empowering capable school principals:**

Gradually give principals more administrative powers as the quality of school leadership improves, including in financial management, the procurement of textbooks and other educational material, and human resources management. These delegations ensure that principals are held accountable for their schools. Provincial departments will remain the employer of educators, and wages will continue to be centrally determined. (p. 310)

Though improvements in school management practices over time are particularly difficult to measure, the trends seen in the available data point to some progress. For instance, the percentage of schools with school improvement plans appears to have gone up, from 79% in 2009 (reported in the 2011 Action Plan) to 88% in 2011 according to the School Monitoring Survey (SMS). The presence of class registers appears to have improved, with 100% of schools having these in 2011 according to the SMS. However, problems persist. A 2009 survey found that 25% of schools in Eastern Cape did not produce annual financial statements. In 2011, according to the SMS, this figure still stood at 21% (the average across the other eight provinces was 9%).

[92] Government Regulation 920 of 2013.
[93] DBE, 2013a.

Perhaps the policy intervention that has shifted school management more than any other in recent years, is the introduction of the Annual National Assessments (ANA). There is much anecdotal evidence that ANA has made it easier for school principals to engage with teachers on the matter of education outcomes. The limited standardisation in assessments that had existed in many schools before ANA had made it difficult for school principals to identify in which grades and subjects the largest problems were. ANA has assisted in highlighting which teachers require the greatest support, and which teachers might be suitable as mentors. A national guide on how ANA can be used within schools, for instance to strengthen school management, is now available[94]. Moving forward, the challenge will be not only to improve the design of ANA (see section 4.1), but also to **identify effective ways in which school principals are actually using ANA so that advice can be based on experiences in schools**. **Simple yet effective computer software that schools can use to diagnose teaching and learning problems on the basis of the ANA results need to become more readily available.** The need for tools and more evidence-driven guidance to schools is something that was emphasised in the 2012 NEEDU report.

Two further initiatives in the coming years to strengthen school management stand out. Firstly, **competency assessments for school principals will be rolled out across the whole public schooling system, partly to ensure that everyone who is appointed into a school principal post fulfils at least the minimum requirements for this job, and partly to provide a profile of the existing group of school principals, including capacity gaps that need to be addressed through training**. This is something that has been prioritised in the NDP. As a necessary prelude to this work, during 2013 the DBE developed 'The South African standard for school principals', drawing from research and extensive consultation. This 25-page document, to be published as a government notice in 2015, provides, for the first time ever, a clear and comprehensive statement of the competencies required of a school principal, and thus a firmer basis for training, assessments and remedial action where principals are struggling or failing. The competency assessments will cover a wide range of skills, from people management skills, to financial planning. The national initiative will draw from many years of experience on school principal competency assessments in Gauteng, where assessments have been outsourced to a third party through a contract that emphasises the need for the assessments and data to remain confidential, and for the evaluation process to be fair and standardised across different schools and over time. National experiences in this initiative will inform the development of similar tools for deputy principals and heads of department. The importance of ensuring that head of department posts are filled by the right people was something emphasised in the NEEDU report.

The second major initiative will be **the updating of the national training programme for school managers**. At the core of this programme is a set of materials, 2 000 pages in total, published in 2008 following a major collaboration between the national department and experts from a range of universities and other organisations[95]. The programme materials and modes of delivery have been considered to be of a high standard by evaluators from inside and outside the country[96]. However, there is room for improvement. For instance, a more consistent use of the national materials by universities delivering the programme seems necessary. The updating of the materials is needed to accommodate important contextual shifts since 2008, such as changes in the curriculum and the introduction of ANA.

Indicator 21. The percentage of schools producing the minimum set of management documents at a required standard, for instance a school budget, a school improvement plan, an annual report, attendance registers and a record of learner marks.

[94] See *A guideline for the interpretation and use of ANA results*, on the DBE website.
[95] The materials, the Advanced Certificate in Education package for school management and leadership, are available on the DBE website.
[96] Bush, Kiggundu and Moorosi, 2011.

The 2011 School Monitoring Survey (SMS), to be repeated in 2015, has taken the monitoring of the 'building blocks' of school management referred to in the 2011 Action Plan a step forward. Whilst earlier surveys had largely relied on the school principal's own report on the presence of certain management documents, the SMS involved basic inspections by external fieldworkers of the documents. The percentage of schools found to have 11 key documents in place in 2011 was 52%[97]. Moving forward, what is needed is closer monitoring of the quality of existing school management documents and what this says about the management problems existing in schools and how to address these problems through policy and capacity building.

6.8 Goal 22: Community participation

Goal 22	Improve parent and community participation in the governance of schools, partly by improving access to important information via the e-Education strategy.

2012 saw the successful roll-out of the most recent school governing body (SGB) elections across all public schools in the country. These elections remain an important cornerstone of democracy and accountability in the schooling system, and indeed the country. At the provincial and national levels, the work of the country's several SGB representative bodies continue to reflect the commitment of society as a whole towards strengthening schools. The strategies of the DBE and this plan are in many cases partly a response to concerns that these SGB bodies have raised. The education departments need to continue to engage closely with them. In particular, the Annual National Assessments (ANA) have allowed parents and communities to engage more directly with schools in the matter of the quality of teaching and learning. How ANA can be used to improve this focus, and allow parents to become more involved in what the school does and what happens in the home to promote learning, should be high on the agenda.

The DBE is working with the World Bank on testing various ways of communicating ANA results to parents in selected schools in Mpumalanga, and examining the impact of different approaches on improvements in learner performance. This is pioneering research in the South African context and is important, given that international evidence shows that action by parents, who may themselves be illiterate, is highly dependent on how information is packaged and distributed.

The DBE's call centre has dealt with, amongst other things, queries and complaints from parents and communities, often in relation to what rights and obligations national policies give to schools and parents. This service should be strengthened, and information collected through it should be used more systematically to assess what the typical concerns of communities are and how to respond to these.

During 2015, considerable attention will go towards the 2015 SGB elections and on inducting and training new SGB members, for instance in relation to the role of the SGB in promoting quality education and upholding the constitutional rights of children.

Indicator 22. The percentage of schools where the school governing body meets the minimum criteria in terms of effectiveness.

The School Monitoring Survey points to a system of school governing bodies that is firmly established, with the great majority of these structures being properly constituted and holding

[97] Department of Basic Education, 2014.

the required minimum of four meetings in the year. About a quarter of SGBs have as members not just parents, but also community members who are not parents at the school. The latest national value for this indicator is 81%, with the lowest provincial values being those for KwaZulu-Natal (75%) and Mpumalanga (70%). The lower values for these two provinces is largely due to fewer schools holding the minimum number of meetings. Clearly, it is difficult to reduce a matter as complex as SGB effectiveness to a number, and the information that underlies any indicator value, as well as more qualitative research examining the role of SGBs, is necessary for a proper understanding of what is occurring in schools.

6.9 Goal 23: School funding

Goal 23	Ensure that all schools are funded at least at the minimum per learner levels determined nationally and that funds are utilised transparently and effectively.

The 'school allocation', or the non-personnel funding that schools receive each year for each learner, remains a vital element in the struggle for better functioning schools and poverty alleviation. In particular, in poorer communities it is important that the school allocation money and goods purchased with this money should reach schools on time each year to prevent pressure on poor households to make contributions they cannot afford. The 'minimum threshold' for the school allocation, or the amount of funding per learner that quintiles 1 to 3 schools (those serving the poorest communities) should receive to maintain their status as 'no fee schools' has increased in real terms. The 2009 to 2014 increase in the threshold from R605 per learner to R1 059 per learner represented a real inflation-adjusted increase of 34%. Household data in fact point to successes in upholding the system of no fee schools. In both 2009 and 2013, officially 60% of learners in public schools were meant to be in no fee schools. The General Household Survey indicates that the percentage of learners actually paying zero fees increased from 51% to 66% between 2009 and 2013, suggesting strongly that implementation of the no fee system in quintiles 1 to 3, as well as fee exemptions for poor learners in quintiles 4 and 5 schools, are working rather well.

Challenges for future years include ensuring that provincial departments do not cut the school allocation to deal with budget pressures in other areas, and that payments are made to schools on time. The data suggest that by 2014 roughly 75% of schools were not receiving less than they should receive. Yet the 2011 Action Plan set a goal of 100% in this regard for 2014. Ensuring the appropriate use of the school allocation funds also remains a challenge. Monitoring of actual spending patterns in schools remains weak in many provinces and policy on pro-active and reactive steps to take against fraud are still not firmly entrenched.

★★★ ***Indicator 23.1. The percentage of learners in schools that are funded at the minimum level.***

Indicator 23.2. The percentage of schools that have acquired the full set of financial management responsibilities on the basis of an assessment of their financial management capacity.

The most recent year for which a comprehensive analysis of school funding exists, is 2010. In that year, 79% of schools can be considered to be have been funded adequately, though to some extent this figure does not reflect resourcing problems linked to non-delivery of goods and services procured by the provincial department on behalf of schools (see the technical report referred to in the appendix below for more details). The poor statistic for Free State seen in the appendix, of 41%, can be considered an anomaly applicable to 2010 only, when this province adjusted the pro-poor spending gradient, though overall spending commitments

in this province were roughly similar to those in other provinces. A preliminary analysis for the 2012 year, based on a reduced sample, pointed to the problem of under-funding with respect to the school allocation being particularly worrying in three provinces: Eastern Cape, KwaZulu-Natal and Limpopo. Analysis of 2014 data pointed to an indicator value of roughly 75% at the national level. This is clearly unsatisfactory and below the target of 100% for 2014. However, there appears to have been progress over time if one compares the 62% national value reported in the 2011 Action Plan (which referred to the situation in the 2008 school year) to the 75% national value estimated for 2014.

The national value for the second indicator, dealing with financial management responsibilities, was 76% in 2011, and there is little to suggest this has shifted much between 2011 and 2014 as there has been little emphasis on such a shift. However, there has been some movement in the right direction insofar as the national value was 64% in 2008 (reported in 2011 Action Plan). One province that appears consistently to be permitting school principals very few financial management responsibilities is Mpumalanga. The 2019 target for this indicator at the national level is 95%.

6.10 Goal 24: School buildings and facilities

Goal 24	Ensure that the physical infrastructure and environment of every school inspire learners to want to come to school and learn, and teachers to teach.

☞ **The NDP on building more with the money we have:**

Investigate the spiralling costs of building schools … Develop measures to build schools at a reasonable cost without compromising quality. (p. 313)

The Accelerated Schools Infrastructure Delivery Initiative (ASIDI), which became fully operational in 2013, is the national department's flagship programme focussing currently on schools whose buildings require complete replacement, for instance because they were built of inappropriate materials. In 2012, 496 schools were identified as requiring replacement. By 2014, 49 new ASIDI schools had been built and a further 196 were under construction. Not only is ASIDI aimed at improving the physical environment of specific school communities, it also allows the DBE to experiment with new building processes and designs. ASIDI only accounts for around 20% of spending on infrastructure in the schooling sector. The remaining 80% is accounted for by provincial building programmes, over which the national department has strengthened its monitoring processes through, in particular, the Education Infrastructure Grant, a grant flowing from the DBE to provincial education departments.

Given the number of roleplayers involved in infrastructure development, having appropriate policies in place to guide the various actors becomes important. A stronger policy framework has been created by the cross-sectoral National Infrastructure Plan[98]. During 2013 the DBE released infrastructure regulations[99] to formalise and clarify guidelines that had been released in 2012. This puts the country on a much better footing than it was previously to deal with the complex matter of standards and targeting in the improvement of school infrastructure. The 2013 regulations envisage four key goals. By 2016 all schools should meet minimum

[98] Department of Economic Development, 2012.
[99] Government Regulation 920 of 2013.

standards with respect to water, toilets, electricity and the materials used for the school building. By 2020 all schools should have at least a minimum number of classrooms, relative to enrolments, as well as electronic connectivity and perimeter fencing. By 2023 all schools should have the required libraries and laboratories and, finally, by 2030 all remaining standards governing, for instance, sporting facilities should be met. ASIDI schools comply with all standards and thus serve as models and testing grounds for the policy.

In 2012, in the interests of greater transparency and accountability, the DBE started publishing on its website the school-by-school infrastructure upgrading plans of the provincial departments.

Part of the challenge in moving forward is to sustain the momentum of current initiatives. However, as indicated in the NDP and the National Infrastructure Plan, public infrastructure development is often not cost-effective and is hampered by unnecessarily complicated bureaucracy. The emphasis in the 2011 Action Plan on innovative approaches, possibly through decentralisation and the funding of school-initiated work, remains relevant. Moreover, ways of ensuring that communities value and hence protect school property is important. The use of the school's facilities after hours for a variety of community-oriented purposes is one way of doing this.

The conditional grant for the upgrading of technical secondary schools, which came to R230 million in 2014, and which has been focussing partly on school workshops, but also the development of teachers, is creating new opportunities for youths to access a more vocationally-oriented Grade 12 qualification (see discussion under Goal 13).

Indicator 24. The percentage of schools complying with a very basic level of school infrastructure.

Whilst government does have relatively good data on the various elements of school infrastructure, such as toilets, science laboratories and general classrooms, and whilst clear standards for infrastructure were published in 2013, how exactly to monitor progress remains a matter of debate. In particular, reducing the quality of school infrastructure to a single indicator value has proven difficult. Notwithstanding these difficulties, it has been estimated that by 2014 around half of schools were complying with minimum standards which the 2013 regulations specify should be reached in all schools by 2020[100]. These standards focus, in particular, on the availability of water, toilets, electricity and a minimum number of classrooms. Specifically, by 2011 an estimated 46% of schools complied with the standards in question. The standards are more stringent than those used for the indicator values published in the 2011 Action Plan. The adequacy of classrooms plays a large role. If classrooms are removed from the calculation, then 84% of schools were found to comply with the remaining standards (water, toilets and electricity) in 2011. Clearly more work needs to occur on the calculation of composite indicator values. What is important is that whatever method is used, the same provinces emerge as having the largest school infrastructure deficits. These provinces are Eastern Cape (by far the worst), KwaZulu-Natal and Mpumalanga.

6.11 Goal 25: Learner well-being

Goal 25	Use schools as vehicles for promoting access to a range of public services amongst learners in areas such as health, poverty alleviation, psychosocial support, sport and culture.

[100] DBE, 2014a.

Government continues to prioritise a number of services in schools which though not of an educational nature, are important for the development of the child and support the education process indirectly. The National School Nutrition Programme (NSNP), whose reach has extended further in recent years (see discussion in the indicator box below), remains an important success story for government, with the conditional grant funding this programme accounting for just over a quarter of the DBE's budget. Going forward, the emphasis needs to be not so much on expanding the programme further, given that it already covers almost all learners in need of publicly funded meals, but rather on upholding the quality of meals and ensuring that the programme is implemented in such a way that its contribution to the learning process is maximised. The 2012 NEEDU[101] report emphasised the importance of ensuring that the processes surrounding the preparation and offering of meals disrupts classes as little as possible.

The last national survey of HIV prevalence, conducted in 2012, pointed to prevalence rates for the 0 to 14 age group being around 2,5% and for the 15 to 19 age group 5,5%[102]. These figures provide a sense of the magnitude of the challenges facing the education system both in terms of facilitating care and treatment, and in terms of prevention through education. The 2007 wave of SACMEQ[103] included the collection of valuable information on teacher and learner knowledge of HIV and AIDS issues. Whilst the data pointed to a high degree of awareness and knowledge amongst teachers, only 35% of Grade 6 learners in South Africa possessed what could be considered the minimum necessary knowledge[104]. The situation for learners is expected to have improved since then, for instance as a result of a life orientation initiative with an HIV and AIDS focus funded through a national conditional grant. Yet there is room for improving the HIV and AIDS education of learners, but also teachers, further. In order to strengthen alignment between various initiatives, the DBE finalised a new strategy document on HIV, sexually transmitted infections (STIs) and TB in 2012[105].

In order to address the serious lack of general health interventions in schools, including health screening of learners, something noted in the 2011 Action Plan, in 2012 the DBE and the Department of Health released an integrated health policy[106]. A vital element in this policy is a minimum package of health services, broken down by three-year curriculum phases, which ultimately all schools across the country should enjoy. The policy re-emphasises the importance of health education as a way of preventing a variety of physical and emotional ills, including bullying, sexual harassment and drug abuse. But it also emphasises that the need for treatment in areas such as visual impairment, mental health and HIV and AIDS must be established early, through the schooling system, so that the relevant referrals to health services can be made.

The DBE will promote research and action around a matter which has received too little attention: the under-performance of boys in schools. SACMEQ data show that boys in Grade 6 obtain test scores, in mathematics and language, which are around 20% of a standard deviation below that of girls (approximately the learning one would expect from five months of schooling). It is largely this academic under-performance which leads more boys than girls to give up on their schooling and drop out. The 2013 General Household Survey showed that for grades 9 to 12, the percentage of girls successfully completing each grade is around 5 percentage points above the figure for boys. The data also indicate that the male under-performance problem has existed for at least ten years, and is found in all provinces and across all race groups.

[101] DBE, 2013c.
[102] Shisana, Rehle, Simbayi, Zuma *et al*, 2014.
[103] Southern and Eastern Africa Consortium for Monitoring Educational Quality.
[104] Moloi and Chetty, 2011: 79.
[105] *Integrated strategy on HIV, STIs and TB 2012-2016*, available on the DBE website.
[106] *Integrated school health policy 2012,* available on the DBE website.

Indicator 25. The percentage of children who enjoy a publicly funded school lunch every school day.

The School Monitoring Survey, the General Household Survey, and monitoring reports compiled by provincial education departments all point to the national value for this indicator currently being at around 70%. This value includes only publicly-funded NSNP meals and excludes learners in schools where it was reported that in the weeks preceding the fieldworker visit, the school was not able to cover five days a week. If schools not able to cover the full five days are included, the 70% figure changes very little, to 71%, indicating that nearly all schools cover all five days. However, if disruptions across the entire school year are considered, then the situation becomes less positive. At the national level, 57% of learners were receiving NSNP meals on every day of the entire year. Disruptions were most serious in Eastern Cape (this was in 2011). At the national level, disruptions affected the provisioning of school meals on 4% of days altogether, meaning the problem is a limited one. Despite these challenges, publicly funded meals represent one of the great success stories of the schooling system. The General Household Survey indicates that between 2009 and 2013, the percentage of public school learners receiving a school meal every day increased from 54% to 68%, with the value at the secondary level improving substantially from 28% to 62% during the same period. These trends are welcome in a context where poverty often gets in the way of effective teaching and learning. Targets for all future years beyond 2014 have been set at 75%, in keeping with the DBE's commitment to shift the emphasis during the coming years from expansion and coverage to the quality of meals.

6.12 Goal 26: Inclusive education

Goal 26	Increase the number of schools that effectively implement the inclusive education policy and have access to centres that offer specialist services.

Work over the years to raise the awareness and knowledge of educators at schools with respect to inclusive education principles and specific special needs methods have clearly borne fruit. By 2011, 64% of learners were in schools where the school principal reported that the school had constituted a team to deal specifically with special needs[107]. Clearly the remaining 36% should be cause for concern and further work is required. As discussed in the indicator box below, the level of skills amongst teachers in schools in the area of special needs education is relatively high. In many schools, the challenge is to ensure that the capacity that exists is properly utilised, partly by ensuring that the principal allocates time to special needs activities, and the necessary structures and physical resources are available.

In 2014 the DBE released for public comment a policy and a set of practical tools relating to special needs support[108]. This is the culmination of many years of testing of various methods, but also much public debate around how inclusive education principles, around which there are many divergent views, ought to be taken forward in South African schools. The DBE believes we have reached a point where the focus should now shift strongly to implementation of a relatively standard package of educational support services. The new policy is aligned to other policies, such as the integrated school health policy (see the previous goal) and spells out the roles of key roleplayers, including the school-based support team, the district-based support team, full-service schools and special schools serving as resource centres. There is still a need for some further policy work, specifically in the area of the provisioning of posts.

[107] DBE, 2014a.
[108] Government Notice 293 of 2014, in combination with the document *Draft policy on screening, identification, assessment and support*, available on the DBE website.

The post provisioning system must still be amended to make provision for itinerant specialists whose services are needed across clusters of schools.

Indicator 26. The percentage of learners in schools with at least one educator who received specialised training in the identification and support of special needs.

The 91% national value for this indicator is a high one, and thus promising. Clearly there is considerable capacity spread across schools to implement special needs support. Yet there are a number of caveats. The School Monitoring Survey data used for the indicator suggest that teachers are most confident if they have a formal qualification focussing on special needs and have also received some informal training. In other words, a combination of more theoretical and practical training is required. Only 63% of learners are in schools where at least one teacher reported having undergone both types of development. The data also suggest that in a substantial number of schools which appear to have the capacity to implement certain special needs education, this work is not occurring. This could be because school principals have not fully bought into the idea of special needs support.

Free State, Gauteng and Western Cape fare relatively well with respect to this indicator, whilst Eastern Cape and Limpopo fare relatively poorly.

6.13 Goal 27: District support ★★★

Goal 27 ★★★	Improve the frequency and quality of the monitoring and support services provided to schools by district offices, partly through better use of e-Education.

☞ **The NDP on districts:**

Many of the weaknesses in schools are a reflection of weaknesses at the district level. … Deploy multidisciplinary support teams to work with districts in the short to medium term. (p. 310)

Several steps have been taken to strengthen the capacity of districts to support schools in the last few years. In 2012 a direct line of communication was created between the national department, on the one hand, and the country's 86 district directors with the establishment, by the Minister, of quarterly meetings to brainstorm key policy imperatives and challenges faced by districts. These meetings have proved effective, not only in strengthening the ties between the national and district levels, but also insofar as they have allowed, for the first time ever, regular interaction between district directors from across the country to share experiences and ideas. In 2013 an official policy on the functions and responsibilities of districts was finalised[109], a necessary basis for arguing for better resourcing of district offices. The 2011 School Monitoring Survey (2011) provided a vital new information source on how schools see the services offered by districts[110]. Feedback from schools must clearly inform how districts are strengthened. The 2011 SMS pointed to some improvement in the quantity of interaction between districts and schools. In 2009, 78% of schools reported that they had at

[109] Government Notice 300 of 2013.
[110] Department of Basic Education (2013a).

least two face-to-face interactions with the district in a year. By 2011, according to the SMS, this had improved to 87%[111].

The Michael and Susan Dell Foundation report[112], produced in collaboration with the DBE, on how information is used in the South African schooling system, in particular at the district level, to assist in the pursuit of teaching and learning goals, offers a valuable basis for understanding challenges relating not just to information systems, but also management approaches, in districts. The report confirms the importance of districts which, it argues, are close to schools, yet sufficiently large, in terms of number of schools, to play a role in facilitating learning between schools and responding to school needs in a systematic manner. Whilst the report acknowledges that in certain provinces and districts pioneering work has been done, it also highlights serious mindset problems (some of which were discussed in section 4.2 on e-education) and problems of duplication and poor prioritisation. Three recommendations from the report stand out. **Firstly, each district needs to take stock of how it uses information, in particular Grade 12 examinations and ANA results, and information on dropping out, to understand and manage education outcomes in the district. Each district should then include within its plans a clear statement of how information use to promote education outcomes should improve. The DBE needs to provide guidance in this regard, using the 2013 policy on the roles and responsibilities of districts as a point of departure.** The work needs to focus partly on the difficult question of how to depart from 'business as usual', where this has resulted in the collection of large volumes of data, which are then not used, simply for compliance purposes. Plans need to focus on how more time and effort can be shifted towards the interpretation of information to shape intervention strategies.

Secondly, district efforts to strengthen the capacity of core staff dealing with data and information needs encouragement and support. Initiatives in this regard must be properly focussed, however, on providing staff offering curriculum and other support to schools with relevant information, and on supporting decision-making in the district. The Dell Foundation report has emphasised the potential for the computerised school management system, SA-SAMS, to serve decision-making in schools and districts in far better ways than is currently the case. Currently, the system is used largely for the collection and submission of data from the school to the provincial department.

Thirdly, a greater variety of standard reports need to be generated, using data that has been collected for some years, to assist district and school managers, but also parents on school governing bodies, in taking the right decisions. These reports need to be designed and presented in such a way that they are truly meaningful to their intended audiences. To some extent, it is possible to draw from existing good practice in the country, for instance the online EduInfoSearch information interface of the Western Cape, which aims to serve the needs of managers from the provincial level, down to the school.

The Dell Foundation report has led to a number of projects involving the DBE and private sector partners aimed at piloting new ways of using data to advance education goals in selected districts. In 2014, total spending on these projects was R75m. **New tools developed out of this work need to inspire and inform districts across the country as they strengthen their ability to support schools.**

Initiatives aimed at improving the information systems of districts are part of a wider trend towards involving partners from the private sector and other stakeholders, in particular unions

[111] The 2009 figure of 78%, quoted in the 2011 Action Plan, was from the National School Effectiveness Study dataset, which excluded Gauteng. The 2011 figure of 87% thus also excludes Gauteng. With Gauteng included, this figure becomes 88%.
[112] Michael and Susan Dell Foundation (2013).

and parent associations, in 'turning around' the schooling system's 86 district administrations. The 2011 Action Plan referred to the need for a high-level multi-stakeholder forum to facilitate partnerships in the sector. The role of the originally envisaged National Education and Training Forum is being fulfilled by two new structures which flow from the National Collaboration Framework[113], agreed upon by stakeholders in 2011. The framework includes a flexible plan, focussing on district improvement, which stretches to 2023. The first structure is the National Education Collaboration Trust (NECT), established in 2013 and aimed at facilitating non-government involvement in education innovation initiatives, in particular at the district level. The NECT is not intended to replace existing partnership initiatives, but rather to expand the range of opportunities and strengthen ties between stakeholders. A second structure, the National Education Council, will be set up largely as a vehicle for interaction on basic education policy matters. **A priority is thus to use these new structures, and the goodwill surrounding them, to bring together the country's best talent in supporting and advising districts, and the schooling system as a whole.** Past experiences point to the importance of not losing ideas and materials developed within locally-focussed partnership projects. **Through the newly established structures, the DBE will work on identifying best practices that should reach a wider audience, based on credible evaluation principles, in particular those of the Presidency's national evaluation policy[114].**

Indicator 27.1. The percentage of schools visited at least twice a year by district officials for monitoring and support purposes.

★★★ Indicator 27.2. The percentage of school principals rating the support services of districts as being satisfactory.

The 2011 School Monitoring Survey (SMS), to be repeated in 2015, indicated that 88% of schools were visited at least twice during 2011. The data were collected in November 2011, so about a month before the end of the school year, meaning the 88% statistic is likely to be a slight under-estimate.

The 2011 School Monitoring Survey (SMS) included several questions on principal satisfaction with district monitoring and support. The national statistic for this indicator, of 50%, was derived after careful analysis of the principal responses[115]. Clearly any derivation of this indicator value is sensitive to how responses are interpreted. In many respects, what is more important than the aggregate indicator value is what the detailed data analysis says about the aspects of district support most in need of improvement.

[113] See *National collaboration framework*, available at http://www.jet.org.za.
[114] Presidency (2011).
[115] See DBE (2013a).

7 Reporting on progress in the sector

Plans need to lead to reports that inform stakeholders on progress against the plan. The 2011 Action Plan outlined in some detail the institutional context within which planning (including budgeting) and reporting within the basic education occur. On the whole, procedures which are already in place will be followed to ensure there is monitoring and reporting against the current plan. Some of these procedures need further strengthening.

At the national level, the DBE will continue to play a key role in ensuring that credible updates on progress in the schooling sector are produced for the nation. The current plan makes reference to a number of important progress reports produced in recent years. It seems clear that the DBE's capacity in this area has improved, yet further improvements are required. Importantly, much of the information that the DBE has relied on for gauging progress against earlier plans is collected from sources who have no interest in distorting this information. Progress in terms of provincial service delivery is largely gathered directly from schools by the DBE. Household survey information has been used to supplement and verify information collected through the sector's own systems. Information from internationally standardised testing programmes will continue to be a key basis for gauging progress with respect to learning outcomes.

The National Development Plan creates new and necessary pressures for reporting. For instance, this reporting will focus strongly on collaboration and alignment across different sectors, for instance between the basic education and health sectors, and between basic education and social development.

One reporting strand that the DBE is working on improving is quarterly reporting by provincial education departments. Quarterly reporting with a holistic sector focus, and with a focus on not just successes, but also risks, needs to be strengthened.

The annual reports of the DBE and the nine provincial education departments, reports which are strongly linked to the budget process and are required by the Public Finance Management Act, will continue to be crucial elements for establishing what the key sector-wide trends are. There is room for improvement with respect to these annual reports, for instance in terms of the credibility of non-financial performance statistics and their strategic focus on learning outcomes as the core deliverable of the basic education sector.

Appendix A: The 36 Action Plan indicators

In this appendix, a number of things are provided with respect to each or most of the 36 indicators of this Action Plan. A first table provides recent historical values per indicator, future targets up to around 2030, and some discussion around measurement and interpretation, all at the national level. A second table provides recent values per province, as well as targets for 2019, plus an indication of how national targets were broken down to the province level. *Unless otherwise indicated, targets appearing in Action Plan 2011 are repeated here.* Clearly this means that where progress has been slower than anticipated, targets will be more difficult to achieve than before. However, targets set in Action Plan 2011 are still all considered more or less achievable in the long run, and for this reason it seemed best to retain those targets.

Priority indicators marked with ★★★ are indicators for the five priority goals, and a few additional priority indicators not directly linked to the priority goals. All indicators remain with their original Action Plan 2011 wording, with the exception of Indicator 9, where the change from Grade 8 to Grade 9 in TIMSS is now reflected.

As argued in the 2011 Action Plan, indicators should not be viewed in isolation from related issues and statistics. Each indicator should, in a sense, serve as a focal point in a broader debate around the topic at hand, a debate which should ideally make use of a variety of data sources.

For certain indicators, improvements shrink in distant future years, in particular 2024. This is in recognition of the fact that education systems tend to find it harder to make large improvements the better they get, or the closer they get to a performance ceiling. Put differently, large improvements are often easier to bring about whilst indicator values are still low.

TABLE 1: NATIONAL INDICATOR VALUES											
	Indicator description	Discussion	Past	2014	2015	2016	2017	2018	2019	2024	2029
1.1 ★★★	Percentage of Grade 3 learners performing at the required *literacy* level according to the country's Annual National Assessments.	The ANA programme needs further refining before year-on-year comparisons, or even comparisons across provinces, can be considered highly accurate. Specifically, 'secure anchor items', or questions that are not freely available in the public domain and are reused in different years need to become more systematically used within the sample-based 'verification ANA'. It is the sample-based component in ANA that is most likely to provide reliable year-on-year comparisons. For more details in this regard, see section 4.1. For the 2014 baseline values, verification ANA results were used (DBE, 2014c).	57 (2014)	60	63	66	69	72	75	90	95
1.2	Percentage of Grade 3 learners performing at the required *numeracy* level according to the country's Annual National Assessments.		56 (2014)	60	63	66	69	72	75	90	95
2.1	Percentage of Grade 6 learners performing at the required *language* level according to the country's Annual National Assessments.	See discussion for Indicator 1.1. For the 2014 value, both home language and first additional language learners were considered.	46 (2014)	60	63	66	69	72	75	90	95
2.2	Percentage of Grade 6 learners performing at the required *mathematics* level according to the country's Annual National Assessments.	See discussion for Indicator 1.1.	32 (2014)	60	63	66	69	72	75	90	95
3.1	Percentage of Grade 9 learners performing at the required *language* level according to the country's Annual National Assessments.	See discussion for Indicator 1.1. For the 2013 value, both home language and first additional language learners were considered.	22 (2014)	60	63	66	69	72	75	90	95
3.2 ★★★	Percentage of Grade 9 learners performing at the required *mathematics* level according to the country's Annual National Assessments.	See discussion for Indicator 1.1.	3 (2014)	60	63	66	69	72	75	90	95

TABLE 1: NATIONAL INDICATOR VALUES											
	Indicator description	Discussion	Past	2014	2015	2016	2017	2018	2019	2024	2029
4 ★★★	Number of Grade 12 learners who become eligible for a Bachelors programme in the public national examinations.	Figures to the right represent thousands of youths. The 2014 baseline figure excludes part-time students, passes in the supplementary examinations and Independent Examinations Board (IEB) students. Of the three exclusions, it is only the IEB results which would influence the indicator value substantially. Around 9 000 Bachelors level passes per year emerge from the IEB. For a discussion of the indicator, see e.g. DBE (2013b).	151 (2014)	190	205	220	235	255	270	350	435
5	Number of Grade 12 learners passing *mathematics*.	Figures to the right represent thousands of youths. The 2014 baseline figure excludes part-time students and passes in the supplementary examinations. Including these other categories tends to raise the figure by around 10%. Only passes in the public examination system are counted here. For a discussion of the indicator, see e.g. DBE (2013b).	121 (2014)	180	198	216	234	252	270	350	380
6	Number of Grade 12 learners passing *physical science*.	See discussion for previous indicator.	103 (2014)	170	186	202	218	234	250	320	350
7	Average score obtained in Grade 6 in *language* in the SACMEQ assessment.	The 495 actual value is from the 2007 run of SACMEQ (Moloi and Chetty, 2010). The target of 520 is applicable to the 2013 run of SACMEQ, whose results should be made available late in 2014. The target of 550 assumes that SACMEQ testing occurs in 2019.	495 (2007)	520					550	600	640
8 ★★★	Average score obtained in Grade 6 in *mathematics* in the SACMEQ assessment.	See discussion for previous indicator.	495 (2007)	520					550	600	640
9	Average Grade 8 *mathematics* score obtained in TIMSS.	The actual value of 352 is from the 2011 TIMSS run, which occurred in Grade 9 in South Africa (Reddy *et al*, 2012). Future targets are those published in Action Plan 2011, incremented by 21 points, as this was the gap between grades 8 and 9 averages in 2003. Targets had to be adjusted upwards in line with the trend for South Africa to participate at the Grade 9 level. The 2024 and 2029 targets apply to assumed TIMSS runs in 2023 and 2027 respectively.	352 (2011)		361				401	441	472
10	Percentage of 7 to 15 year olds attending education institutions.	The key source for this indicator is the General Household Survey.	98,8 (2012)	99,0	99,2	99,4	99,6	99,8	100	100	100

TABLE 1: NATIONAL INDICATOR VALUES											
	Indicator description	Discussion	Past	2014	2015	2016	2017	2018	2019	2024	2029
11 ★★★	The percentage of Grade 1 learners who received Grade R.	Issues relating to the calculation of this indicator are described in DBE (2013b). The source is household data (General Household Survey of Stats SA), partly to ensure that Grade R outside ordinary schools is included. For this indicator it is possible to use the household data for one year to obtain the indicator value applicable to the following year.	96 (2014)	100	100	100	100	100	100	100	100
12.1	The percentage of children who turned 9 in the previous year and who are currently enrolled in Grade 4 (or a higher grade).	See important points relating to the calculation of this indicator in DBE (2013b) and correction appearing in Appendix B of the current plan. The key source for this indicator is the Annual Survey of Schools.	73 (2013)	65	67	69	71	73	75	85	90
12.2	The percentage of children who turned 12 in the previous year and who are currently enrolled in Grade 7 (or a higher grade).	See note for previous indicator.	63 (2013)	52	54	55	57	58	60	75	80
13.1	The percentage of youths who obtained a National Senior Certificate from a school.	Past values are obtained using both household data and official examinations reports. Indicator values for 2009-2011 in DBE (2013b) were adjusted upwards to reflect the very large increase in the number of passes in the 2013 examinations.	45 (2014)	50	52	54	56	58	60	70	75
13.2	The percentage of youths who obtained any FET qualification. (This is an indicator of concern to DBE and DHET.)	See important points relating to the calculation of this indicator in DBE (2013b). Past values are obtained using both household data and official examinations reports.	47 (2014)	65	72	79	86	93	100	100	100
14	The number of qualified teachers, aged 30 and below, entering the public service as teachers for the first time during the past year.	Figures to the right represent thousands of teachers. The key source for this indicator is the Persal payroll system. The DBE's analysis to arrive at these figures involves looking at several years of data at once in order to take into account the fact that it is common for educators to enter and leave multiple times, often as temporary educators, before they 'settle into' the system. Not taking into account these dynamics can lead to an over-estimation of joining (but even attrition). The figures provided in this report can be considered to reflect the entry of qualified teachers *for the first time ever* into the public system in provinces. The age of teachers is the age in October of the year of entry	6,8 (2014)	8	9	10	10	11	12	12	14

TABLE 1: NATIONAL INDICATOR VALUES											
	Indicator description	Discussion	Past	2014	2015	2016	2017	2018	2019	2024	2029
15.1	The percentage of learners who are in classes with no more than 45 learners.	The key source for this indicator is the Annual Survey of Schools of the DBE.	65 (2013)	80	83	86	89	92	95	100	100
15.2	The percentage of schools where allocated teaching posts are all filled.	The key source for this indicator has been the School Monitoring Survey of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	90 (2011)	92	93	93	94	94	95	100	100
16.1	The average hours per year spent by teachers on professional development activities.	The key source for this indicator has been the School Monitoring Survey of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	39 (2011)	51	55	58	62	66	70	80	80
16.2 ★★★	The percentage of teachers who are able to attain minimum standards in anonymous and sample-based assessments of their subject knowledge.	This is an indicator of great strategic importance, but it is also the indicator in the current list for which there is least data. The best data available are the 2007 SACMEQ Grade 6 teacher test results. These data are discussed in e.g. DBE (2013b). The 41% indicated here is from the mathematics test and uses an analysis of the correlation between learner results, percentage of learners achieving acceptable standards and teacher test results to arrive at a 'pass mark' for teachers (793 SACMEQ points). Targets will be set when more recent and comprehensive baseline data are available.	41 (2007)								
17	The percentage of teachers absent from school on an average day.	The key source for this indicator has been the School Monitoring Survey of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	8 (2011)	8	7	7	6	6	5	4	4
18 ★★★	The percentage of learners who cover everything in the curriculum for their current year on the basis of sample-based evaluations of records kept by teachers and evidence of practical exercises done by learners.	The key source for this indicator has been the School Monitoring Survey of the DBE. See important points relating to the calculation of this indicator in DBE (2013a). The methodology of examining learner writing books used in the 2011 School Monitoring Survey represents an important step forward in the monitoring of this important aspect of education service delivery.	53 (2011)	60	63	66	69	72	75	90	100

TABLE 1: NATIONAL INDICATOR VALUES											
	Indicator description	Discussion	Past	2014	2015	2016	2017	2018	2019	2024	2029
19 ★★★	The percentage of learners having access to the required textbooks and workbooks for the entire school year.	The key source for this indicator has been the School Monitoring Survey of the DBE. It is important to note that these statistics refer to learners who have the books they need *in the classroom* during the visit of a fieldworker. Improving values thus depends on a host of factors: deliveries of books to schools, re-use of books from one year to the next, the teacher's insistence that learners do not leave books at home, and learner self-discipline around the use of books. See an important explanation of the methodology in DBE (2013a).	61 (2011)	69	77	84	92	100	100	100	100
20 ★★★	The percentage of learners in schools with a library or multimedia centre fulfilling certain minimum standards.	The key source for this indicator has been the School Monitoring Survey of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	40 (2011)	51	55	59	63	66	70	85	100
21 ★★★	The percentage of schools producing the minimum set of management documents at a required standard, for instance a school budget, a school improvement plan, an annual report, attendance registers and a record of learner marks.	The key source for this indicator has been the School Monitoring Survey of the DBE. Given the difficulties around collecting and interpreting data on the quality of school management documents, it was decided to allow baseline figures and targets to focus just on the availability of documents during the fieldworker visit. The DBE remains committed improving the monitoring of the quality of these documents. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	52 (2011)	70	76	82	88	94	100	100	100
22	The percentage of schools where the school governing body meets the minimum criteria in terms of effectiveness.	The key source for this indicator has been the School Monitoring Survey of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	81 (2011)	84	86	87	88	89	90	100	100
23.1 ★★★	The percentage of learners in schools that are funded at the minimum level.	The key source for this indicator has been the School Monitoring Survey of the DBE. 2010 is the most recent year for which a comprehensive analysis of the various facets of the implementation of the funding norms was available. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	79 (2010)	100	100	100	100	100	100	100	100

TABLE 1: NATIONAL INDICATOR VALUES											
	Indicator description	Discussion	Past	2014	2015	2016	2017	2018	2019	2024	2029
23.2	The percentage of schools that have acquired the full set of financial management responsibilities on the basis of an assessment of their financial management capacity.	The key source for this indicator has been the School Monitoring Survey of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014.	79 (2011)	85	87	89	91	93	95	100	100
24 ★★★	The percentage of schools complying with a very basic level of school infrastructure.	Key sources for this indicator are the School Monitoring Survey and the National Education Infrastructure Management System of the DBE. Details on the calculation of baseline values can be found in the report *Second detailed indicator report for basic education sector*, completed in 2014. The standard that informs the 46% baseline value seen here conforms more or less what official regulations state should be achieved by 2020.	46 (2011)	64	70	76	82	88	94	100	100
25	The percentage of children who enjoy a publicly funded school lunch every school day.	Past values are produced after careful consideration of three sources: official nutrition programme reports, the General Household Survey and the School Monitoring Survey. See DBE (2014a) for the method used. 2011 figures are provided for the baseline, but GHS data suggest the situation remained more or less unchanged between 2011 and 2013.	70 (2011)	75	75	75	75	75	75	75	75
26	The percentage of learners in schools with at least one educator who received specialised training in the identification and support of special needs.	The key source for this indicator has been the School Monitoring Survey of the DBE. See DBE (2014a).	91 (2011)	80	84	88	92	96	100	100	100
27.1	The percentage of schools visited at least twice a year by district officials for monitoring and support purposes.	The key source for this indicator has been the School Monitoring Survey of the DBE. See DBE (2013a) for methodology.	88 (2011)	93	94	96	97	99	100	100	100
27.2 ★★★	The percentage of school principals rating the support services of districts as being satisfactory.	The key source for this indicator has been the School Monitoring Survey of the DBE. See DBE (2013a) for methodology. Obviously, values for this indicator are strongly depending on the wording of the questionnaire principals must answer and the way responses are interpreted.	50 (2011)	55	59	63	67	71	75	85	90

TABLE 2: PROVINCIAL INDICATOR VALUES		Past values (see Table 1 for year)										2019 targets									
	Indicator description	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC
This table should be read with the previous one. In particular, the previous table includes important references to reports that explain the methodology used for individual indicators. Unless otherwise stated, 2019 provincial targets seen below are calculated using an approach where worse performing provinces are expected to achieve larger improvements, in absolute and proportional terms, meaning worse provinces are expected, over time, to catch up to better performing provinces, though the latter are also expected to improve. Provincial target values moreover take into account the fact that larger provincial systems have larger effects on national indicator values.																					
1.1 ★★★	Percentage of Grade 3 learners performing at the required *literacy* level according to the country's Annual National Assessments.	**57**	51	65	71	57	43	57	45	51	64	**75**	70	79	78	77	72	73	71	72	80
1.2	Percentage of Grade 3 learners performing at the required *numeracy* level according to the country's Annual National Assessments.	**56**	52	65	74	56	34	55	49	39	68	**75**	72	74	79	76	70	74	74	73	83
2.1	Percentage of Grade 6 learners performing at the required *language* level according to the country's Annual National Assessments.	**46**	28	49	74	40	26	40	48	41	75	**75**	69	76	84	74	69	71	75	75	86
2.2	Percentage of Grade 6 learners performing at the required *mathematics* level according to the country's Annual National Assessments.	**32**	22	41	53	31	16	27	24	20	45	**75**	71	75	78	76	72	73	73	75	80
3.1	Percentage of Grade 9 learners performing at the required *language* level according to the country's Annual National Assessments.	**22**	16	22	34	19	8	22	28	19	38	**75**	74	75	78	74	72	74	78	75	80
3.2 ★★★	Percentage of Grade 9 learners performing at the required *mathematics* level according to the country's Annual National Assessments.	**3**	2	5	3	3	1	4	3	3	3	**75**	75	75	75	75	75	75	75	75	76
4 ★★★	Number of Grade 12 learners who become eligible for a Bachelors programme in the public national examinations. *Values here and for the following two indicators refer to thousands of youths.*	**151**	13	8	37	36	16	11	2	9	19	**270**	33	15	52	67	33	21	5	17	27
5	Number of Grade 12 learners passing *mathematics*.	**121**	13	7	25	29	18	10	2	6	11	**270**	40	15	46	66	38	21	5	16	23
6	Number of Grade 12 learners passing *physical science*.	**103**	11	6	20	25	18	9	1	5	8	**250**	38	14	42	60	37	21	5	15	19
7	Average score obtained in Grade 6 in *language* in the SACMEQ assessment.	**495**	448	491	573	486	425	474	506	506	583	**520**	481	517	585	513	462	503	529	529	593

TABLE 2: PROVINCIAL INDICATOR VALUES		Past values (see Table 1 for year)										2019 targets									
	Indicator description	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC
8 ★★★	Average score obtained in Grade 6 in *mathematics* in the SACMEQ assessment.	**495**	469	493	545	485	447	477	499	503	566	**520**	498	518	561	512	480	505	523	527	579
9	Average Grade 9 *mathematics* score obtained in TIMSS.	**352**	316	359	389	337	322	344	366	350	404	**401**	382	407	424	394	385	398	411	402	433
10	Percentage of 7 to 15 year olds attending education institutions.	**98,8**	98,4	99,2	99,0	98,8	99,2	99,0	98,6	98,8	98,2	**100**	100	100	100	100	100	100	100	100	100
11 ★★★	The percentage of Grade 1 learners who received Grade R. *Past values (including the national value) are means using General Household Survey data 2011 to 2013.*	**97**	99	100	94	85	98	98	90	100	98	**100**	100	100	100	100	100	100	100	100	100
12.1	The percentage of children who turned 9 in the previous year and who are currently enrolled in Grade 4 (or a higher grade).	**73**	63	69	83	75	80	68	69	70	70	**75**	73	73	77	76	77	75	72	73	73
12.2	The percentage of children who turned 12 in the previous year and who are currently enrolled in Grade 7 (or a higher grade).	**63**	49	59	78	63	67	58	57	57	64	**60**	57	58	64	60	62	59	57	57	60
13.1	The percentage of youths who obtained a National Senior Certificate from a school.	**45**	33	43	49	49	48	49	39	39	46	**60**	53	59	59	66	64	61	54	56	57
13.2	The percentage of youths who obtained any FET qualification. (This is an indicator of concern to DBE and DHET.)	**47**	35	45	51	51	50	51	41	41	48	**100**	100	100	100	100	100	100	100	100	100
14	The number of qualified teachers, aged 30 and below, entering the public service as teachers for the first time during the past year. *Values refer to thousands of teachers.*	**6,8**	0,2	0,4	1,6	1,7	0,6	0,7	0,2	0,5	0,2	**12**	1,1	0,7	2,4	2,9	1,4	1,1	0,3	0,9	1,2
15.1	The percentage of learners who are in classes with no more than 45 learners.	**65**	62	77	74	62	51	54	77	66	86	**95**	95	96	96	94	93	93	98	95	98
15.2	The percentage of schools where allocated teaching posts are all filled.	**90**	85	82	86	95	93	89	95	91	95	**95**	92	91	93	97	96	94	97	95	97
16.1	The average hours per year spent by teachers on professional development activities.	**39**	36	40	34	46	30	37	39	40	55	**70**	69	70	69	72	68	69	70	70	74
16.2 ★★★	The percentage of teachers who are able to attain minimum standards in anonymous and sample-based assessments of their subject knowledge.	**41**	38	40	53	42	26	15	50	46	71										

TABLE 2: PROVINCIAL INDICATOR VALUES		Past values (see Table 1 for year)										2019 targets									
	Indicator description	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC
17	The percentage of teachers absent from school on an average day.	**8**	8	6	7	10	9	7	6	6	4	**5**	5	5	5	6	5	5	5	5	4
18 ★★★	The percentage of learners who cover everything in the curriculum for their current year on the basis of sample-based evaluations of records kept by teachers and evidence of practical exercises done by learners.	**53**	27	49	85	54	46	64	46	24	76	**75**	60	72	92	75	71	80	71	59	87
19 ★★★	The percentage of learners having access to the required textbooks and workbooks for the entire school year.	**61**	68	55	67	55	54	52	64	67	84	**100**	100	100	100	100	100	100	100	100	100
20 ★★★	The percentage of learners in schools with a library or multimedia centre fulfilling certain minimum standards.	**40**	22	67	69	34	8	50	42	38	72	**70**	60	83	84	66	53	75	70	68	86
21 ★★★	The percentage of schools producing the minimum set of management documents at a required standard, for instance a school budget, a school improvement plan, an annual report, attendance registers and a record of learner marks.	**52**	40	46	70	48	62	52	62	57	67	**100**	100	100	100	100	100	100	100	100	100
22	The percentage of schools where the school governing body meets the minimum criteria in terms of effectiveness.	**81**	83	86	88	75	82	73	83	76	90	**90**	91	93	94	87	90	86	91	87	95
23.1 ★★★	The percentage of learners in schools that are funded at the minimum level.	**79**	81	41	84	77	85	94	79	68	82	**100**	100	100	100	100	100	100	100	100	100
23.2	The percentage of schools that have acquired the full set of financial management responsibilities on the basis of an assessment of their financial management capacity.	**76**	77	55	90	75	88	35	67	86	86	**95**	95	90	98	95	97	86	93	97	97
24 ★★★	The percentage of schools complying with a very basic level of school infrastructure.	**46**	29	63	58	34	52	38	70	39	73	**94**	92	96	95	93	95	93	97	93	97
25	The percentage of children who enjoy a publicly funded school lunch every school day.	**70**	82	77	50	70	88	69	85	77	45	**75**	81	78	65	75	84	74	83	78	62
26	The percentage of learners in schools with at least one educator who received specialised training in the identification and support of special needs.	**91**	80	96	97	94	80	94	92	96	99	**100**	100	100	100	100	100	100	100	100	100
27.1	The percentage of schools visited at least twice a year by district officials for monitoring and support purposes.	**88**	75	96	100	91	85	98	90	91	99	**100**	100	100	100	100	100	100	100	100	100

TABLE 2: PROVINCIAL INDICATOR VALUES		Past values (see Table 1 for year)										2019 targets									
	Indicator description	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC	SA	EC	FS	GP	KN	LP	MP	NC	NW	WC
27.2 ★★★	The percentage of school principals rating the support services of districts as being satisfactory.	**50**	48	49	62	48	50	47	53	31	67	**75**	74	74	79	74	75	73	76	67	81

Appendix B: Details on grade and age

A variety of values have been put forward in the past for the indicators in this plan dealing with grade attainment by age. The following table reproduces key figures:

Table 1: Summary of national indicator values

Year	Indicator 12.1: The percentage of children who turned **9** in the previous year and who are currently enrolled in Grade **4** (or a higher grade).	Indicator 12.2: The percentage of children who turned **12** in the previous year and who are currently enrolled in Grade **7** (or a higher grade).	Source document (and data source)
2009	61	47	2011 Action Plan p. 200 (combination Annual Survey of Schools and General Household Survey)
2012	58.0	40.9	DBE (2013b: 20). (Just Annual Survey of Schools.)
2013	73.4	63.1	Current analysis (Annual Survey of Schools).

Importantly, there was a coding problem in the calculation of the 2012 figures appearing above, and as a result the 2012 values are lower than they should be. The same applies to the 2010 and 2011 values previously published in the 2013 sector progress report (DBE, 2013b: 20). The correct 2010 to 2013 values, all calculated using the same methodology and all using the Annual Survey of Schools dataset, are as follows:

Table 2: Indicator values by province 2010-2013

	Indicator 12.1: The percentage of children who turned **9** in the previous year and who are currently enrolled in Grade **4** (or a higher grade).					Indicator 12.2: The percentage of children who turned **12** in the previous year and who are currently enrolled in Grade **7** (or a higher grade).				
	2010	2011	2012	2013	Clear trend?	2010	2011	2012	2013	Clear trend?
EC	60.6	62.2	62.0	63.1		46.6	47.3	46.5	49.0	
FS	72.4	72.6	72.1	69.4		57.5	59.6	59.5	59.5	
GP	83.4	82.9	82.3	83.1		75.6	77.6	77.2	77.7	
KN	74.2	74.3	75.1	75.0		63.2	64.1	64.3	63.2	
LP	81.3	76.6	80.6	79.7		63.4	62.3	65.7	67.0	
MP	76.0	73.7	73.7	68.5		60.6	60.9	61.6	58.4	
NC	70.9	69.3	66.0	69.3		54.3	55.8	53.4	57.0	
NW	68.2	68.8	70.0	70.1	*	53.6	54.6	56.2	56.8	*
WC	73.1	72.6	71.0	69.7		63.6	65.7	65.1	64.5	
SA	74.0	73.5	74.0	73.4		61.3	62.3	62.8	63.1	*

A clear trend is indicated with an asterisk if (a) there is a continuous increase across the four years and (b) the 2013 value is at least one percentage point higher than the 2010 value.

Appendix C: Useful documents

The documents listed below all inform the current Action Plan, are all publicly available, and are mostly available on the internet. The focus here is on more recent documents that were not listed in the bibliography of the 2011 Action Plan.

Armstrong, P. (2014). *Teacher wages in South Africa: How attractive is the teaching profession?* Stellenbosch: University of Stellenbosch.

Australian Council for Educational Research (2013). *Formative evaluation of textbooks and workbooks*.

Branson, N., Garlick, J., Lam, D. & Leibbrandt, M. (2012). *Education and inequality: The South African case.* Cape Town: SALDRU.

Bush, T., Kiggundu, E. & Moorosi, P. (2011). Preparing new principals in South Africa: the ACE school leadership programme. *South African Journal of Education*, 31: 31-43.

Chauraya, M. (2013). *Mathematics teacher change and identity in a professional learning community*. Johannesburg: University of the Witwatersrand.

Cristia, J.P., Ibarrarán, P., Cueto, S. & Santiago, A. (2012). *Technology and child development: Evidence from the One Laptop Per Child programme*. Washington: Inter-American Development Bank.

Department of Basic Education (2009). *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement*. Pretoria.

Department of Basic Education (2011). *2011 report on progress in the schooling sector*. Pretoria.

Department of Basic Education (2012). *IQMS annual report 2011/12*. Pretoria.

Department of Basic Education (2013a). *Detailed indicator report for basic education sector*. Pretoria.

Department of Basic Education (2013b). *Report on progress in the schooling sector against key indicators*. Pretoria.

Department of Basic Education (2013c). *NEEDU national report 2012: The state of literacy teaching and teaching in the Foundation Phase*. Pretoria.

Department of Basic Education (2013d). *Report on the Annual National Assessment of 2013*. Pretoria.

Department of Basic Education (2013e). *Developing and evaluating the first phase of the Grade 12 Mind the Gap study guide series*. Pretoria.

Department of Basic Education (2013f). *The internal efficiency of the school system*. Pretoria.

Department of Basic Education (2014a). *Second detailed indicator report for basic education sector*. Pretoria.

Department of Basic Education (2014b). *The Ministerial Task Team report on the National Senior Certificate*. Pretoria.

Department of Basic Education (2014c). *Report on the Annual National Assessment of 2014*. Pretoria.

Department of Economic Development (2012). *A summary of the South African National Infrastructure Plan*. Pretoria.

Farrell, G. & Isaacs, S. (2007). *Survey of ICT and education in Africa*. Washington: infoDev.

Fullan, M., Watson, N. & Anderson, S. (2013). *Ceibal: Next steps*. Toronto: Michael Fullan Enterprises.

Gustafsson, M. (2012). *The gap between school enrolments and population in South Africa: Analysis of the possible explanations*. Stellenbosch: University of Stellenbosch.

Howie, S., Van Staden, S., Tshele, M., Dowse, C. & Zimmerman, L. (2012). *South African children's reading literacy achievement*. Pretoria: Centre for Evaluation and Assessment.

Michael and Susan Dell Foundation (2013). *Success by numbers: How using data can unblock the potential of South Africa's R-12 public schooling system.* Cape Town.

Moloi, M.Q. & Chetty, M. (2010). *The SACMEQ III project in South Africa: A study of the conditions of schooling and the quality of education*. Pretoria: Department of Basic Education.

Mullis, I.V.S., Martin, M.O., Foy, P. & Arora, A. (2012). *TIMSS 2011 international results in mathematics*. Chestnut Hill: Boston College.
Mullis, I.V.S., Martin, M.O., Foy, P. & Drucker, K.T. (2012). *PIRLS 2011 international results in reading.* Chestnut Hill: Boston College.
Mullis, I.V.S., Martin, M.O., Gonzalez, E.J. & Chrostowski, S.J. (2004). *TIMSS 2003 international mathematics report*. Chestnut Hill: Boston College.
National Planning Commission (2012). *National development plan 2030: Our future - make it work*. Pretoria.
Presidency (2011). *National evaluation policy framework*. Pretoria.
Presidency (2014). *The impact of the introduction of Grade R on learning outcomes*. Pretoria.
Ralaingita, W. & Wetterberg, A. (2011). Gauging programme effectiveness with EGRA: Impact evaluations in South Africa and Mali. In Amber Gove and Anna Wetterberg (ed.), *The Early Grade Reading Assessment: Applications and interventions to improve basic literacy.* Research Triangle Park: RTI Press.
Reddy, V., Prinsloo, C., Arends, F. & Visser, M. (2012). *Highlights from TIMSS 2011: The South African perspective*. Pretoria: HSRC.
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